AMATEUR RADIO

JULY 1964

Vol. 32, No. 7

FIRST AUSTRALIAN S.S.B. CONVENTION, HAMILTON, VIC., MAY 16-17, 1964

Back Row (left to right): Harry VK3ZX, Andy VK3UJ, Mac VK3AZM, Lee VK3XM, Arie VK3AVA, Tim VK3TW, Reg VK5QR, Frank VK3ZU, Col VK5RO, Bernie VK6KJ, Thorb VK3APS, Ken VK3KC.

Third Row: John VK3JX, Bill VK5XB, Arthur VK5HY, Roy VK3ES, Phil - VK5NN, Bill VK3AHT, Bill VK3RE, George VK3AG, John VK2QJ, Shep VK5DC, Harold VK3AHC, Geoff VK3AC.

Second Row: Al VK5MF, Owen VK2AEB, John VK3AWL, Ted VK2AXD, Dudley VK2DQ, Bruce VK3BM, Jack VK3JA, Bill VK3WK, Laurie VK3VH, Ben VK5RD, Comps VK5EF.

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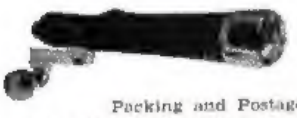

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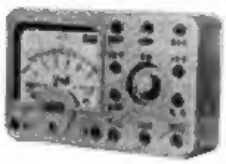

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OUR COVER

The first S.s.b. Convention in Australia was held at Hamilton, Vic. Details of this event will be found on page 13.

FEDERAL COMMENT

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50th ANNIVERSARY

It is pleasing to record the 50th Anniversary of the American Radio Relay League in this year of 1964. Two other Societies have also recently passed this historic milestone—our own Society, the W.I.A. in 1960, and the Radio Society of Great Britain in 1963. Since its formative years, the A.R.R.L. has become the largest and most influential Society of Radio Amateurs in the world.

One might be forgiven for believing that it is because the A.R.R.L. has such a large membership—now nearly 200,000—that it has "ploughed" its way to the top. Undoubtedly, a healthy membership is a big factor, but the real reason lies deeper than this. The key lies partly in the foresight of its early pioneers, their proximity to the "old world", their sound foundation for their organisation, and more than a modicum of that innnate American ingenuity and persuasive, business sense.

Although it is generally conceded that Great Britain developed radio broadcasting, it was our American contemporaries who saw the future possibilities of this medium and made it a commercial proposition. It was therefore to be expected that the early Radio Experimenters in the U.S.A. would take advantage of commercial components and take a leading part in experiment work and become the major power in Amateur Radio.

It was perhaps natural for the A.R.R.L. to take a lead in the formation of an international union of Amateur Societies in 1926, the year in which the International Amateur Radio Union was born and of which the W.I.A. was a foundation member. Later in 1927, at the Washington Radio Conference, the A.R.R.L., backed by their government, fought almost a lone hand against strong opposition to assign special bands of frequencies for Amateur use. They won the day, and established a precedent for which all Radio Amateurs today may be justly grateful.

The A.R.R.L. and the I.A.R.U. have, through the years since those early days, fought strongly for and defended Amateur privileges, and it is mainly their efforts which enable us to enjoy our hobby today. The A.R.R.L. have been the sole financial supporters of the I.A.R.U. since its formation and can be satisfied the Union now boasts membership from over 50 countries including the U.S.S.R. The A.R.R.L. can be justly proud of its record in Amateur affairs and in this, their anniversary year, of moving into magnificent new quarters in Newington.

It is therefore with gratitude and great pleasure that we associate ourselves with the A.R.R.L. in their Golden Anniversary celebrations and wish them well for the future. The A.R.R.L. has set Amateur Radio a great example over the years—all I.A.R.U. Societies could not do better than emulate this fine example.

FEDERAL EXECUTIVE, W.I.A.

CONTENTS

YOUR PYE REPORTER, PTCA-116, Mk. II.

PART ONE—THE RECEIVER

DAVID PRIESTLEY, WIA-L3163*

Due to a large number of Pye Reporters already on the market, and the number that come up for sale from time to time, these instructions are published to enable more of the Australian Amateur fraternity to make good use of these sets, and at the same time give us an Australia-wide 6 metre band net.

These instructions are not to be confused with those that appeared in the September 1963 issue of "Amateur Radio," which were to do with the PTCA-116 Mark I. Lining up procedure for both sets is entirely different as was discovered when trying to line-up according to instructions for the Mark I. series.

The signal generator used was a Hewlett Packard with sensitivity of 0.1 of 1 microvolt, and 0.001 of 1 cycle per second accuracy.

The experimental set, owned by the author is sensitive to ½ microvolt, and is accurate, in the receiver, to within 2 cycles per second of the net frequency.

Pertinent details for receiver line-up are as follows:—

Signal frequency	53.0320	Mc.
Crystal frequency	13.98833	„
1st i.f. frequency	11.02763	„
2nd i.f. frequency	2.96070	„

Coil numbers are taken from the circuit of the PTCA-116, Mark II.:—

L1—7½ turns 18 g. tinned copper wire.

L2, L3, L4—6½ turns 18 g. enamelled copper wire.

L5—28 turns 23 g. enamelled copper wire.

RECEIVER ALIGNMENT

Because of deterioration brought about by ageing, it will be necessary to replace Westector diodes 1, 2 and 3 in the circuit. Diode type AA119 will be found to be efficient, yet favourably priced.

Set all trimmers to approximately half mesh and adjust Philips trimmers on T1 to about 1-1½ turns from full mesh.

Adjust slug in L5 for maximum reactance.

Set signal generator to 2.96070 Mc. and check T2, T3, T4 and T5.

Set signal generator to 11.02763 Mc. and feed into L4 at the join of C11. Reset Philips trimmers to maximum output level.

At the Pye connector feed in a signal at 53.0320 Mc. and readjust all trimmers for maximum output.

The result should be quite rewarding.

A quick check around Amateurs in metropolitan Melbourne showed an abundance of circuit diagrams for the PTCA-116 Mark II. Reporters. It is known too that many Amateurs in other States have these circuits, and it was felt that the cost involved of redrawing circuits would not be warranted with this fact in mind.

It should also be noted that the majority of Amateurs using this frequency are using vertical polarisation and that unless a cubical quad or whip aerial is used, nothing will be forthcoming.

In VK3 land, the net is most active during the week-end and good strength signals can be heard coming from all over the metropolitan area, with the occasional foreigner from VK7 land riding the noise.

For a whip aerial we used a piece of stainless steel rod, purchased for about 3/-. The rod, of one-eighth inch diameter was cut to 58½ inches in length and fed into the receiver through 50 ohm coaxial cable.

The impedance of the feeder is critical, and every endeavour should be made to use the correct Pye connector, readily obtainable through disposals.

How to line up the transmitter, what to do and what not to do when doing this very finicky job will appear in a later issue.

* C/o. R.A.A.F. Base, Werribee, Vic.

KEEPING OUT OF THAT MODULATED MILK BOTTLE

With the advent of more t.v. stations coming into operation, it is a pretty good bet that more and more Amateur transmitters will be putting those unwanted harmonics into these frequencies. Having been through this, may I be permitted to pass on the findings of experiments from here.

Situated approximately 100 miles from the Adelaide transmitters, and with a reading of about 10-40 microvolts during daylight hours, you will see that it called for drastic measures. The grid dipper was tried out at about one watt out and successfully blacked out all channels with a second or third harmonic.

Then the following in order was brought about, and over a period of time the interference was brought to a minimum. So much so, that we could go on 20 metres and cause no t.v.i. with 100 watts. I must, in all fairness, say that some nights here the signal is as strong as the viewing in the metropolitan area, however this is rare. T.v. is viewable each night.

So, do not have any shafts that are hot to r.f. protruding out from the cabinet.

All meter leads to be shielded and suitably by-passed as per A.R.R.L. Handbook. Meters to be shielded.

Completely shield the transmitter in a steel box, bore only a minimum of holes for ventilation, no holes to be larger than one quarter of an inch and no closer together than this distance.

Avoid using large pieces of copper gauze.

Instal a pi coupler on the output, if possible on the driver stage, of good design.

Keep your grid drive as near as possible to the correct amount, if anything slightly low.

Keep all low-level stages tuned to resonance.

Obtain your operating frequency with as few stages as possible.

It is a waste of time to carry out any tests without the t.v. transmitter on the air. If you have one particularly bad channel you find is causing you concern, it may be a good idea to instal a series resonant trap at the coax terminal inside the transmitter, tuned to the t.v. transmitter's frequency.

Coaxial output is a must to the tuner, into which must be inserted one low pass filter, but in the case of 21 Mc. it will be better to instal a half wave filter. However this will have to be changed each time you change bands. Reference for half wave filters (July "A.R." 1957).

It would also be advisable to instal an s.w.r. bridge in this lead also.

Keep your antenna as far away as possible from the t.v. antenna.

A good earthing system is very necessary, with a very short lead.

Once you get to the aerial tuner, it does not seem to matter what type of feed you use to the antenna, as you should not have any harmonics present.

Do not shift frequency without retuning the transmitter.

Watch all diodes you may have in monitors, especially those with a long length of wire to energise them, as these can cause trouble.

The experiments on the above subject are unlimited, but the foregoing should remove most of the interference from most transmitters.

Follow the elimination diagram in the R.S.G.B. Handbook re t.v.i.

Particular pains should be taken in the by-passing of leads, both h.t. and heaters. Leads that go from compartment to compartment should also be by-passed with disc ceramics.

It is a fascinating subject and a lot of satisfaction can be had when it is eventually conquered.

—Bert Behenna, VK5BB

A 5/8 WAVELENGTH VERTICAL FOR TWO*

HERBERT S, BRIER, W9EGQ

• This ⅝ wavelength vertical antenna is ideal for mobile or fixed operation and particularly for nets and local ragchewing.

WITH all the descriptions and pictures of multi-element v.h.f. beam antennae seen in the various Amateur journals, some Amateurs forget that the simple vertical v.h.f. antenna still has definite advantages for certain types of operation. A vertical antenna, for example, is much simpler to install and far less conspicuous on an automobile than a horizontal antenna. Also the omni-directional radiation pattern of the vertical antenna is highly desirable in local v.h.f., C.D., emergency and ragchewing nets where none of the stations are very far apart, but who are scattered in every direction of the compass. Under these conditions, a beam is often a disadvantage, because, in no matter which direction it is turned, you can't hear all the stations in the net.

What we really need is to retain the advantages of a vertical for local work, and, at the same time, achieve a little antenna gain—without too many complications. Actually, there is an antenna that meets these specifications. It is the ⅝ wavelength vertical. Although it is 2½ times as long as a ¼ wavelength antenna, the ⅝ wavelength antenna has a power gain of almost 3 db., and the resulting length (four feet on 2 metres) is easily accommodated on the v.h.f. bands. Equally important, the antenna is simple to build, as indicated in Fig. 1.

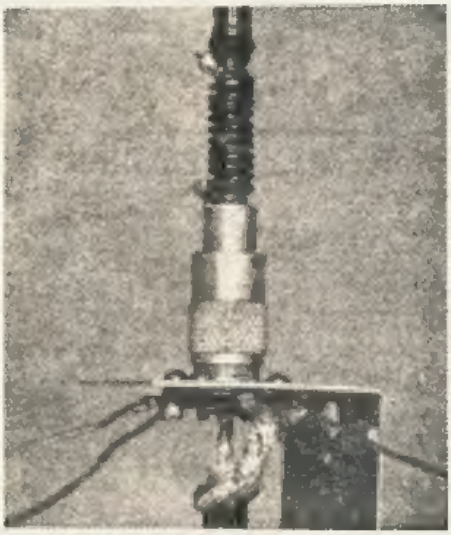
THEORY OF OPERATION

Touching briefly on the operation of the ⅝ wavelength antenna, as a short vertical antenna is increased in length, its radiated power is concentrated more and more at angles approaching the horizon. But, as the length exceeds ¼ wavelength, a secondary lobe of high-angle radiation develops in the radiation pattern. In spite of this, the low-angle radiation from the antenna continues to increase until a length of ⅝ wavelength is reached. Beyond this length, however, the low-angle radiation decreases, and the high-angle radiation increases. Thus a ⅝ wavelength vertical antenna gives the maximum low-angle radiation possible in a simple vertical antenna.

Because a ⅝ wavelength is a non-resonant length, a small inductance is connected in series with the antenna to increase its effective electrical length to ½ wavelength (without changing its radiation pattern). With the addition of the loading coil, the ⅝ wavelength antenna sketched in Fig. 1 has a feed-point resistance of approximately 50 ohms, a close match for 50 ohm coaxial cable.

CONSTRUCTION

To construct the antenna, obtain an inexpensive fibre-glass fishing rod at least four feet long and approximately ¼" in diameter at the large end. Such rods are often available for less than $2.00 during special sales at sporting-good and department stores. Detach the rod from its handle, and remove the ferrules from the rod. On some rods, the ferrules are fastened to the rod with wrappings of cord and are easily removed completely; on others, they are crimped in place. If yours is of the latter type, it may be better to clip off as much as possible of the ferrules, and smooth off the remaining rough edges with a file. Then, measuring from the large end, cut the rod to a length of 48".



Close-up of the base section of the 2 metre antenna showing the loading coil and ground plane assembly for fixed station operation. Connections to the coax line were left untaped to show the details. Tape these connections and the connector for weather protection.

Drill a 3/32" hole through one side of the rod an inch from the large end, and thread a length of No. 14 bare copper wire through the hole and out the bottom of the rod (which is usually hollow at this point). Allow about an inch of the wire to protrude at each end. Next, place a PL-259 type coaxial connector over the end of the rod, threading the No. 14 wire through its centre contact. Cement the connector in place with epoxy-resin or similar adhesive. After the cement has set, solder the wire to the connector.

Remove the outer vinyl coating from a four-foot length of RG-58/U or similar coaxial cable, and slide the shield braid off the cable on to the fibre-glass rod. Push the braid down to within about two inches of the bottom of the rod. Next wrap a turn and a half of No. 14 wire around the shield braid 1½" above the previously-installed wire. Allow about an inch of the wire to protrude at right angles to the rod and parallel to the first wire. Solder the wire to the braid and trim off the excess braid below the wire. Next, tightly wrap the shield braid with plastic electrical tape. Finally, space wind an 11-turn coil of No .14 wire in the 1½" space between the two protruding wires on the rod, terminating the ends of the coil at these wires.

INSTALLING THE ANTENNA

For a mobile installation, mount a standard, chassis-type coaxial connector on the automobile fender, roof, or trunk, etc., and screw the antenna to it. The photograph gives hints for constructing a ground-plane base for using the antenna in a fixed-station installation.

The four ¼ wavelength radials (19¼" long) shown in the picture are constructed of No. 12 wire; but, for increased rigidity and improved appearance, No. 10 or larger wire is recommended. Suitable wire in various gauges can be obtained in the form of plastic-covered house wire from electric supply and mail order houses. Remove the plastic coating before using the wire, of course. You can also obtain heavy duty solder lugs for mounting the radials from the same sources. Of course, 50-ohm coaxial cable is used to feed the antenna.

ADJUSTMENT

Connect an s.w.r. bridge in the feedline between the transmitter and the antenna, and vary the spacing between turns in the antenna loading coil for minimum feedline s.w.r., which was just over 1½ : 1 in this installation. Depending on the actual diameter of the fibre-glass rod used and other variables, it may be necessary to add a turn to or subtract a turn from the loading coil to obtain minimum s.w.r. After the coil is adjusted, solder its ends to the protruding leads, trim off the excess wire, and coat the coil with low-loss dope to weather-proof it and to hold the turns in place.

(Continued on Page 6)

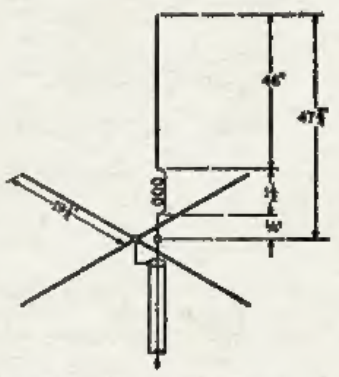


Fig. 1.—Construction details for the 2 metre ⅝ wavelength antenna. The antenna base is a PL-259 coaxial connector on an SO-239 with four No. 10 copper wire radials, 19¼ inches long, attached. The loading coil has 11 turns of No. 14 wire wrapped around the 48 inch x ¼ inch fibre-glass rod.

* Reprinted from "CQ," February 1964.

SINGLE SIDEBAND:

AN EXPERIMENTAL SINGLE CRYSTAL FREQUENCY SYNTHESIZER*

G, R. B. THORNLEY, G2DAF

MANY experienced s.s.b. workers are looking for an improved method of transmitter frequency control. The conventional v.f.o. using some form of tunable LC oscillator has the merit of simplicity, but unfortunately it suffers from frequency drift. To give some idea of how great this frequency error can be, it is of interest to examine the figures given in the Collins publication "Fundamentals of Single Sideband." These are shown, together with figures of other types of oscillators, in Table 1. It is also important to realise that the errors quoted are for a v.f.o. of first class design and construction made with all the resources of a large factory. The home constructor would be very lucky indeed if he could match these figures—in practice his frequency error is likely to be much worse than the figures given.

So far as Amateur stability requirements are concerned, the crystal oscillator can be considered drift-free. It follows therefore that the ultimate aim is some method of providing the required v.f.o. output, but in some way obtained from, or controlled by, a stable quartz crystal oscillator.

One method of doing this is the result of some experimental work undertaken by the writer in which the output of a stable 100 kc. quartz bar is divided down into 2.5 kc. "steps" and the "steps" given continuous coverage by "pulling" the crystal. [The basic principle together with a block diagram of the associated stages was given in Single Sideband, R.S.G.B. "Bulletin," Nov. 1963.] That part of the equipment associated with the balanced converters, V4 and V5, the bandpass filter, the v.f.o. and the tunable output stages is conventional circuitry that is well known. The early stages comprising the 100 kc. oscillator, the frequency dividers and the harmonic amplifier will, however, be relatively unfamiliar. These will now be described in detail.

Fig. 1 shows the circuit diagram of all stages up to the input of the first converter V4. The first valve, V1, is arranged as a Colpitts oscillator using either an EF80 or EF91 valve. A variable capacitor of 50 pF. is connected effectively in shunt with the 100 kc. quartz bar. This is the **fine tuning** control, and is used to "pull" the crystal the small amount necessary.

Output from the oscillator V1 is fed via the 50 pF. capacitor to the anode of a blocking oscillator V2a. The oscillator repetition frequency is controlled by the time constant of the 500 pF. capacitor and the 330K ohms resistor in the grid circuit. Transformer T1 is used to couple energy from the anode back into the grid circuit to maintain oscillation. Fine control of repetition rate is obtained by the 25K ohms preset potentiometer VR1. The blocking oscillator is adjusted to run at approximately 20 kc. and is held in synchronisation by the triggering pulses from V1 (i.e., every fifth sine wave from the 100 kc. oscillator anode arrives at the right moment of time necessary to initiate the start of the 20 kc. blocking oscillator waveform).

The second blocking oscillator V2b is made to run at a lower frequency by the greater value of the grid capacitor —in this case 0.002 μF. Fine control of repetition rate is obtained by the potentiometer VR2 so that the oscillator free runs at approximately 5 kc. It will be noted that the 0.002 μF. grid charging capacitor is not returned directly to earth (as in the grid circuit of V2a) but is returned via a 200 ohm resistor that is also part of the cathode circuit of V2a. This provides the synchronising pulse, and the reason for taking this pulse from the previous oscillator cathode instead of the more obvious transformer side of the valve will be described later.

The third blocking oscillator, V3a, has the time constants of the grid circuit chosen to run at a lower speed than V2b. Potentiometer VR3 is adjusted until the repetition speed is approximately 2.5 kc. The synchronising pulse is again taken from the pre-

LONG TERM FREQUENCY ERROR

Oscillator Type	Error %	Error c.p.s. 3 Mc.	10 Mc.	30 Mc.
Variable Frequency Oscillator ..	0.05	1,500	5,000	15,000
Crystal Oscillator	0.005	150	500	1,500
Temperature Controlled Crystal Oscillator	0.001	30	100	300
Precision Standard Oscillator ..	0.0001	3	10	30

SHORT TERM FREQUENCY ERROR

Oscillator Type	Error P.P.M.	Error c.p.s. 3 Mc.	10 Mc.	30 Mc.
Variable Frequency Oscillator ..	20	60	200	600
Crystal Osc. and Temperature Controlled Crystal Oscillator	1	3	10	30
Precision Standard Oscillator ..	0.01	0.03	0.1	0.3

Table 1.
P.P.M.—Parts per million.

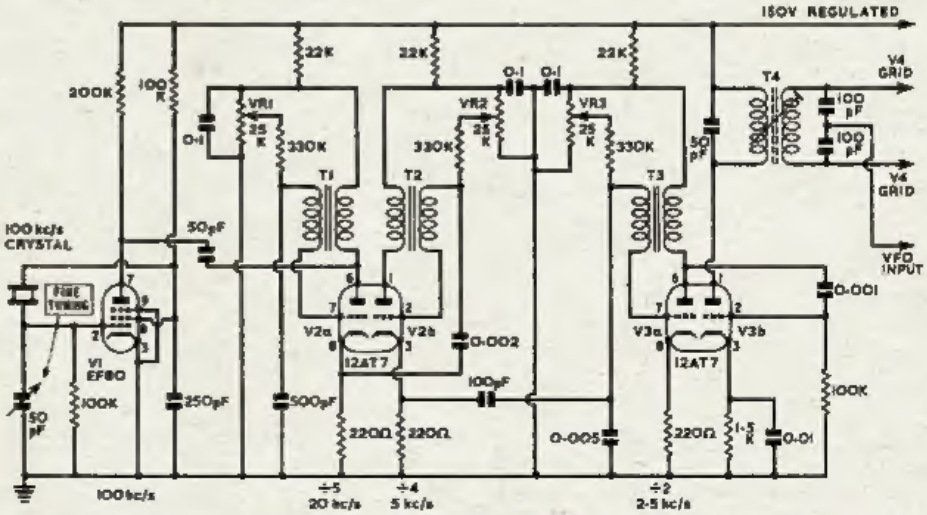


Fig. 1.—Circuit diagram showing crystal oscillator, blocking oscillator dividers and harmonic amplifier. VR1, VR2 and VR3 may be ½w. pre-set potentiometers. All resistors ½w. rating.

* Reprinted from R.S.G.B. "Bulletin," Dec. '63.

vious oscillator cathode, but in this case via a 100 pF. capacitor to limit the pulse amplitude.

It will be seen that the stable signal source has a repetition frequency of 100 kc. and that V2a, set to 20 kc., is dividing down by a factor of five. V2b set to 5 kc. is dividing down by a factor of four, and V3a set to 2.5 kc. is dividing down by a factor of two. The total blocking oscillator chain is therefore dividing down by 5 x 4 x 2 = 40 and is therefore producing an output of 2.5 kc. that is locked back to, and controlled by, the 100 kc. stable crystal oscillator.

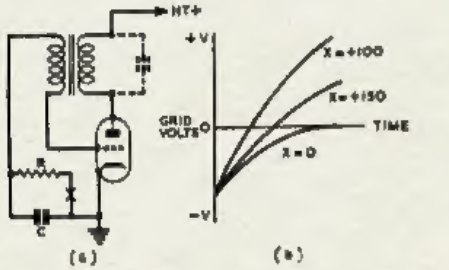


Fig. 2.—(a) Blocking oscillator circuit (point X may be taken to a source of positive potential). (b) Graph showing discharge of capacitor C. If resistor R is returned to a source of positive potential, discharge speeds up and cuts zero bias line at a more acute angle—giving improved accuracy of hold control.

The large amplitude pulse at the anode of V3a is coupled via the 0.001 μF. capacitor to the grid of the harmonic amplifier V3b. This stage is driven positive into heavy grid current that takes the valve into class C operation and a small angle of anode current flow that is rich in harmonic output. Transformer T4 is resonated at 3.25 Mc. and this feeds a spectrum of 2.5 kc. harmonics—over the range 3.0 to 3.5 Mc.—into the following converter valve grids.

The blocking oscillator transformers used in the prototype were Haynes Radio Type TQ132 connected so that there is a step down from the anode to the grid. Standard inter-valve audio transformers of 3 : 1 or 4 : 1 should be equally suitable.

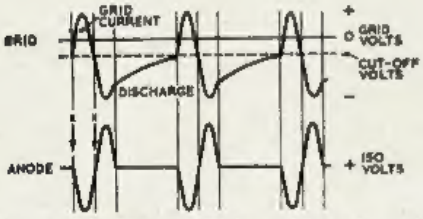


Fig. 3.—Blocking oscillator—grid and anode waveform width XX determined by resonant frequency of transformer primary.

BLOCKING OSCILLATOR FREQUENCY DIVIDERS

Blocking oscillator time bases are widely used in domestic television receivers because they are easily synchronised and the degree of "hold" or "lock" is very good. It is this characteristic that makes it possible to provide a 2.5 kc. output that will still remain in synchronisation with the 100 kc. controlling source while this source is being "pulled" in frequency by the fine tuning variable capacitor.

A basic blocking oscillator circuit is shown in Fig. 2; loosely this can be looked upon as a tuned anode oscillator with a coupled feedback winding of a type commonly used for r.f. application, but so proportioned as to provide an extreme case of intermittent oscillation. This is achieved by (i) making the anode inductance large and using only the valve and distributed capacitance for tuning; (ii) using a turns ratio between anode and grid so that the peak grid driving voltage is high; (iii) using a grid capacitor that is not too large; and (iv) employing a grid leak of sufficient resistance to make the time constant RC large.

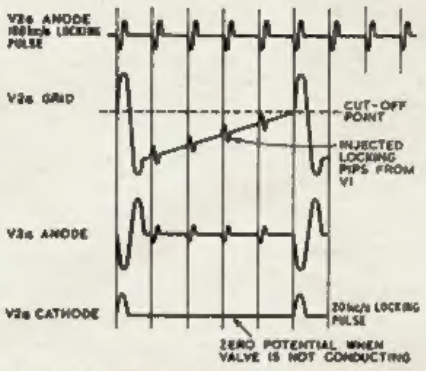


Fig. 4.—Oscilloscope trace at various points in the circuit of the first divider V2a.

Under these conditions the waveforms that are generated have the character shown in Fig. 3.

A full explanation of the action of the blocking oscillator is so complex, it is outside the scope of these notes. Some knowledge of the way in which the oscillator waveform is derived will, however, be of value. Briefly, a single half cycle of oscillation will build up sufficient charge on the grid capacitor C to provide a bias that is much greater than the cut-off bias of the valve. At this moment of time the valve ceases to conduct and the energy stored in the resonant system is dissipated in a damped oscillation that is super-imposed on the bias voltage across the grid

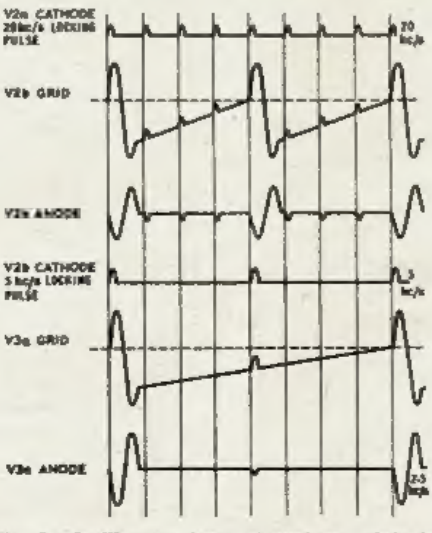


Fig. 5.—Oscilloscope trace at various points in the circuit of the second and third divider V2b and V3a.

leak capacitor combination. This bias voltage, decays exponentially according to the time constant of RC; when it reaches the cut-off value of the valve, anode current again flows and the cycle then repeats.

A cathode ray oscilloscope is necessary in order to set up the dividers. The oscilloscope trace at various points in the circuit of the first divider V2a is shown in Fig. 4. VR1 is adjusted until exactly four pips appear during the discharge period of the grid charging capacitor, as shown. There is therefore one oscillation for every five oscillations of the 100 kc. crystal and the blocking oscillator is dividing down by a ratio of five. During the duration of the 20 kc. pulse, V2a grid is biased beyond cut-off, and the valve is not conducting, therefore the cathode is at zero potential. At the onset of grid current, V2a conducts heavily, a potential appears across the 200 ohm cathode bias resistor and produces a positive-going pulse. This pulse at the repetition frequency of 20 kc. is used to lock the second divider.

The various oscillograms for the second and third divider are shown in Fig. 5. In this case VR2 is adjusted until exactly three pips appear during the discharge period, and the divider is then running at exactly one quarter the frequency of the incoming 20 kc. synchronising pulse—that is at 5 kc. Finally VR3 is adjusted until one pip appears in the centre of the discharge period of V3a. This divider is then running at half the frequency of the incoming 5 kc. synchronising pulses, that is at the required final output frequency of 2.5 kc. ●

☆

A Five-Eighth Wavelength Vertical for Two

(Continued from Page 3)

In a ground-plane installation, the position of the radials will affect the s.w.r. obtained. As a suggestion, start with them slanting downward from the base of the antenna about 30 degrees. Then, after the antenna coil is adjusted for minimum s.w.r., try bending the radials up and down for a possible further slight reduction in s.w.r.

ADDITIONAL CONSTRUCTION NOTES

If you can find a shop where fishing rods are repaired, you may be able to obtain a fishing rod "blank" for much less than the cost of a complete rod. Also look around for a broken rod from which the 48" length can be salvaged. Incidentally, adjustment of the coil will compensate for slight differences in rod length, but don't exceed the specified length.

RESULTS

Experience shows that replacing a ¼ wave vertical with the ⅝ wave type definitely increases transmitting range somewhat, but the greatest improvement is apparent on reception, especially when the antenna is low. ●

Construction and Calibration of a V.F.O.*

JOSEPH A. SMITH, W9ZDN

THE usefulness and dependability of a v.f.o. can be greatly enhanced by an accurate calibration to within one kilocycle. To do this, naturally, the first step is to construct a truly stable v.f.o. that possesses both short and long run frequency stability; that is stability over a period of many days, not just one or two days.

This article presents an example of a time proven v.f.o. of this extra-stable type. Its drift over a one-week period usually does not exceed 0.04% or roughly that of the usual run of a non-precision crystal.

In other words, although this v.f.o. is placed on standby during reception periods of a QSO, it still does not drift more than 400 to 500 cycles during a week of operation. Naturally, a normal warm up period is used.

How, you may ask, is this stability obtained? Well, in the following manner:—

1. The Clapp oscillator circuit is used.
2. A combined unregulated and super-regulated power supply is built-in to furnish 350 volts unregulated to the plates of the two buffer stages, and 150 volts (plus or minus one volt) for the oscillator and both buffer stage screen grids.
3. The v.f.o. operates in the 160 metre band, and output is taken from the plate tuned second buffer-doubler on 80 metres.
4. N.p.o. capacitors are used across the oscillator's silver mica grid capacitors.
5. All oscillator parts are firmly mounted.

• This stable v.f.o. exciter covers 80 and 40 metres and can, with slight modification, cover 160 also. Part of the package includes a super-regulated power supply and output is about 5 watts.

CIRCUIT DESCRIPTION

The circuit of the v.f.o. is shown in Fig. 1. Actually it might more accurately be called an exciter for it has considerable output. A 6AG7 is used in a series tuned Clapp circuit in the 160 metre band. A 6F6 untuned buffer follows the oscillator to provide maximum isolation. This stage is followed by a doubler to bring the output frequency into the 75-80 metre band. This circuit will work well with an 80 metre coil in the oscillator tank circuit and double into the 40 metre band with a 40 metre tank coil in the output.

The power supply is super-regulated for the plate of the oscillator and all the screen grids. The plates of the 6F6 buffer and 6L6 doubler operate directly from the filtered 350 volt line.

CONSTRUCTION

The construction techniques used to build this or any v.f.o. are critical. Mechanical construction **must** be sound. For example, a heavy steel or aluminium panel should be used and it should be thoroughly braced at the ends. Both variables in the oscillator circuit **must** be secured firmly so that they will cause no instability. There must be adequate ventilation and any shielding must be rigid.

The **bandset** variable is a 140 pF. capacitor located under the chassis near the oscillator coil. The **bandspread** capacitor is a 50 pF. double bearing type from which a number of rotor plates will be removed in the calibrating procedure to follow.

CALIBRATION

The dial used is a National Type N Velvet Vernier and it is calibrated from zero to 100. A scale for subdividing a single scale division into tenths is also affixed above the main dial. The actual frequency calibration is done on a sheet of graph paper 22" x 17". It contains 16 large squares across and 21 large squares down. Each one inch square is further subdivided into ¼" units. For this calibration each ¼" division is equal to 2 kc. One kc. therefore is a half of the ¼" square. Two scales were plotted in our calibration. First the 80 metre band and then the 40 metre band.

The actual calibration procedure requires the use of some standards. An accurately calibrated receiver such as the Collins 75A line is desirable as well as a stable crystal oscillator.

With the **bandspread** variable at about half mesh, adjust the **bandset** capacitor to zero-beat against a 3.75 Mc. crystal. The accuracy of this crystal can be checked against WWV on 15 Mc., the fourth harmonic of 3.75 Mc.

Next set the **bandspread** variable to minimum capacity and adjust the turns on the v.f.o. coil so that you are tuned just inside the upper limit of the 80 metre band.

Now, rotate the **bandspread** capacitor so that the plates are fully meshed. This should bring you close, **but inside**, the lower edge of the band. If you move outside the band, remove one rotor plate at a time until the frequency drops back into the band.

With crystals in the 80 and 40 metre band check as many points as possible making a listing of dial reading versus frequency. In between points may be checked on an accurate receiver or a BC221 frequency meter, if available. Plot all the points on the graph, dial readings on the horizontal axis and frequency on the vertical axis and connect the plotted points.

Finally, once each week, check the v.f.o. against WWV at 15 Mc. (v.f.o. at 3.75 Mc.) and correct any long term drift with the **bandset** capacitor. •

1,250 FT. TUBULAR MASTS

Contracts were recently signed in England for the construction of the two highest t.v. masts in Europe. They will be 1,250 feet high and located in Yorkshire and Lincolnshire. These masts, unlike the usual kind built of a latticework of steel girders, will consist of a steel tube, 9 feet in diameter, with a lift inside to enable the aerials to be serviced!!

—L3042/BERS195.

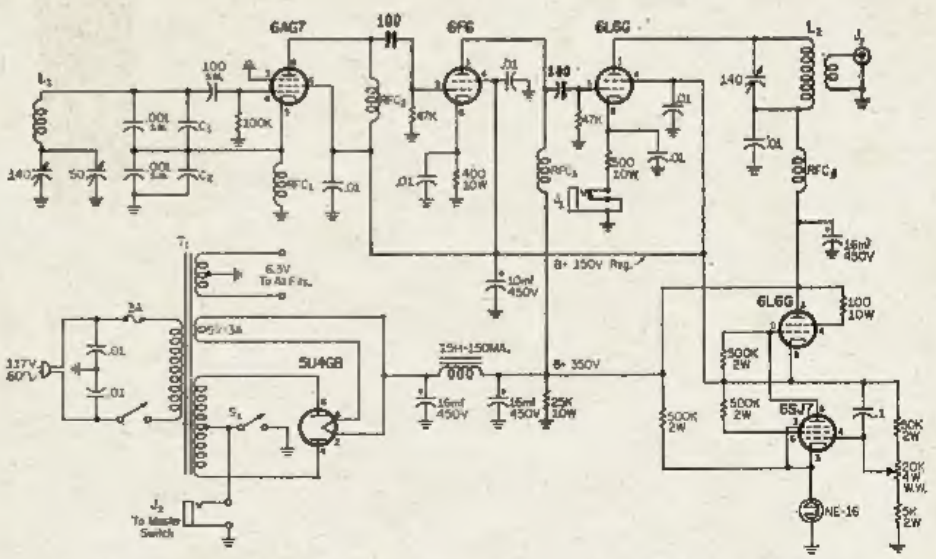


Fig. 1.—Circuit of a stable v.f.o. for operation in the 80 or 40 metre bands. Switch S1 can be paralleled through J3 for break-in operation. All capacitors are in pF. unless otherwise noted. All resistors are ½ watt unless otherwise indicated.

C1—39 pF. (N750).
C2—20 pF. (N750).
L1—B. & W. 160 metre coil.
L2—B. & W. 80 metre 75w. coil.

RFC1 to RFC4—2.5 mH., 100 mA.
T1—375-0-375 v. at 200 mA. approx., 6.3 v. at 4 amps., 5 v. at 3 amps.

* Reprinted from "CQ," July 1963.

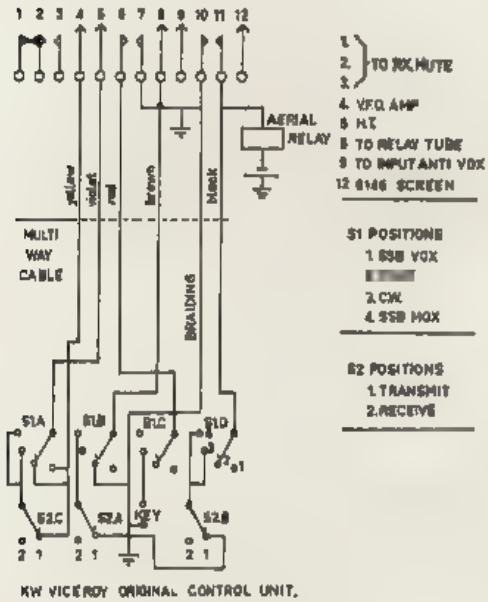
VICEROY MARK I. AND CONTROL UNIT

A. M. CREWTHER, VK3SM'T*

Recently I had the job of assisting to put a Viceroy Mk. I. s.s.b. transmitter on the air and struck several problems when it came to connecting up the control box which has four positions: (1) s.s.b. vox, (2) tune, (3) c.w., (4) s.s.b. mox, and also a second switch for transmit and receive.

The following faults were noted: (a) the transmitter could not be netted on s.s.b. mox or c.w., (b) when switched to c.w. the transmitter could not be keyed

The accompanying drawings show the original circuit as supplied with the control unit and the modified unit. These modifications consist of:—



KW VICEROY ORIGINAL CONTROL UNIT.

(1) On switch bank S1A, cut the strap between bank contacts 3 and 4, tie 4 to 1 and 2, and connect master contact of S2C to S1A, 3. (This permits netting to take place on all modes but c.w.) If netting is required on c.w. strap 4 and 5 on the terminal strip of the transmitter, but this is not recommended as any leak-through will be noticed in the receiver.

(2) On bank S1B strap 3 and 4. This turns the transmitter on for c.w. when S2 is operated to transmit.

(3) On bank S1D strap 1 and 2 and tie to tag 2 on bank of S2B.

(4) On bank S1D cut strap between tags 3 and 4 and connect the external wire on to tag 4.

(5) On S2B remove wire from master contact of switch.

(6) On S2B remove earth from bank contact 1 and connect to the master contact.

(7) On S2B connect wire, removed from master contact in step 5, to bank contact 1.

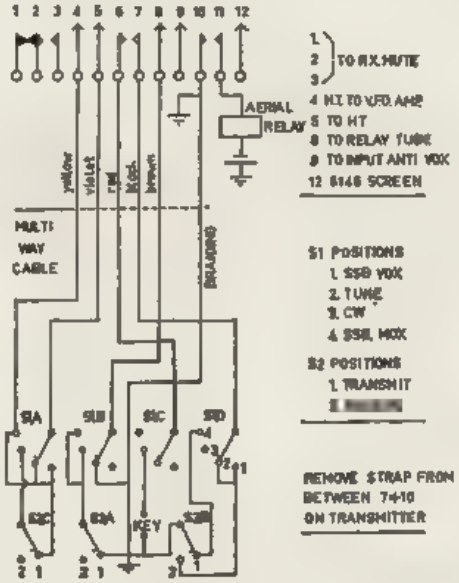
(8) Remove the strap from terminal 7 to 10 on back of the transmitter.

(9) Shift the black wire of the cable from terminal 11 to terminal 7 on back of the transmitter.

In the circuit diagrams the relay contacts shown filled in are normally made with the relay inoperative, and the contacts shown open are normally open.

This completes the modification and the transmitter will now do all the things that the control box said that it should.

I have since modified my own transmitter to this circuit (when purchased I did not get a control unit) and have had no trouble.



KW VICEROY MK1. MODIFIED CONTROL UNIT.

Also, if the 6870 crystal oscillator for the last conversion stage fails, a 6BX6 may be substituted. This calls for cutting the strap between pins 4 and 5 of the socket, removing the wire from pin 6, and fitting it to either 4 or 5 (the one that does not have a wire on it). This modification changes the filament connection to that of a 6BX6, all other elements are in similar position. Also a 6BX6 is already in the unit so this reduces the number of tube types. ●

* 28 Reynolds Pde., Pascoe Vale South, Vic.

SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

Book Review

ELECTRONIC CIRCUITS HANDBOOK
By Tom Kneitel, WB2AAI

This book is divided into eleven sections, all of interest to Amateurs, who are interested in circuits that work, without going into lengthy details as to why. For an American publication, there is very little in the way of kilowatt equipment, but plenty of low power, even by Australian standards, making it a useful book for those interested in gadgetry for mobile or portable work.

A good buy at 36/6 per copy, posted.

Our copy from McGill's Authorised Newsagency, 183-185 Elizabeth St., Melbourne, Vic.

☆

MEET XE1CE

Carlos Gonzalez Nejera, Snr., XE1CE, P.O. Box 66581, Mexico, D.F., Mexico.

Carlos is 54 years old, married, has two sons (Radio Hams themselves, XE1AZ and XE1GJ). Carlos is a chemical and metallurgical engineer. He has worked for about ten years in the mining industry in South Mexico. For almost 25 years in refineries in the oil industry. At present Carlos is in the group in charge of Petrochemicals. Mexico, incidentally, produces 350,000 barrels a day in 14 modern refineries. Carlos regularly corresponds with VKs. Very active on s.s.b., Carlos uses HT37, SX117 and SX111, and this feeds into a 3 element Yagi. Carlos considers himself very lucky to posses no less than 50 international certificates, some of which include D.X.C.C., B.E.R.T.A., T.P.A., and C.H.C. The award which has been his pride and joy hangs proudly in his library, is [redacted] the less than the W.A.V.K.C.A. award. Congrats. Carlos, our mutual hobby is a better hobby through men like you.—Bert, VK5BB.

TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.," in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

Manuscripts should preferably be typewritten but if handwritten please double space the writing. Drawings will be done by "A.R." staff.

Photographs will be returned if the sender's name and address is shown on the back of each photograph submitted.

Please address all articles to the
EDITOR "A.R.,"
P.O. BOX 36,
EAST MELBOURNE, C.2,
VICTORIA.

REMEMBRANCE DAY CONTEST, 1964

A handsome perpetual trophy is awarded annually for competition between States, inscribed with the names of those who made the supreme sacrifice, and so perpetuating their memory throughout Amateur Radio in Australia.

The name of the winning Division each year is also inscribed on the trophy. In addition, the winning Division will receive a suitably inscribed framed photograph of the trophy.

Objects

Amateurs in each Call Area (this includes those in Australian Mandated Territories and Australian Antarctica) will endeavour to contact Amateurs in all other Call Areas (VK1 and VK2 are to be considered to be in the one Call Area; likewise VK5 and VK8).

Date of Contest

Saturday, 15th August, and Sunday, 16th August, 1964.

Duration

From 1800 hours E.A.S.T., 15th August, to 1759 hours E.A.S.T., 16th August, 1964. A period of 15 minutes' silence will be observed by all stations on 15th August, immediately prior to the beginning of the Contest, when an appropriate broadcast will be made and relayed from Divisional Stations.

RULES

1. There shall be four sections to the Contest:—
   (a) Transmitting Phone.
   (b) Transmitting C.w.
   (c) Transmitting Open.
   (e) Receiving Open.

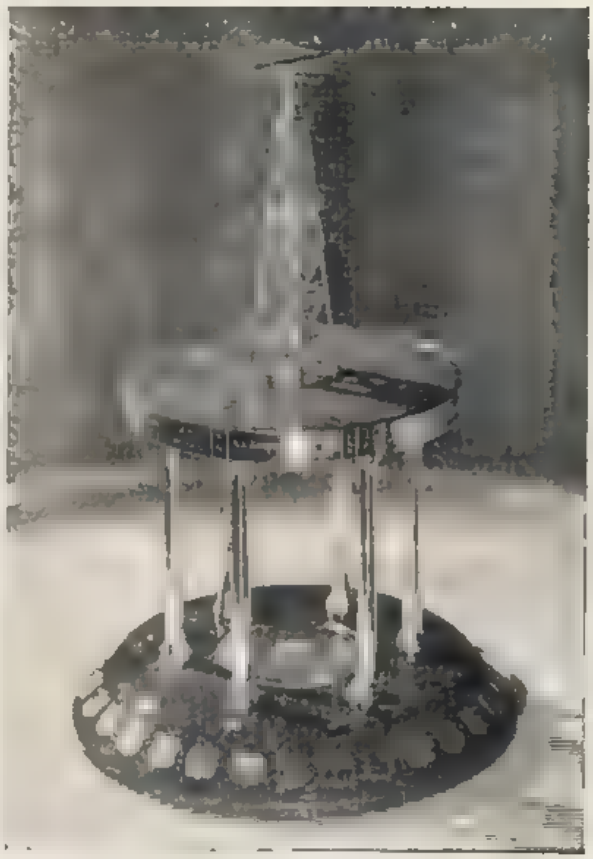
2. All Australian Amateurs may enter the Contest whether their Stations are fixed, portable or mobile. Members and non-members of the W.I.A. will be eligible for the awards.

3. All Amateur frequency bands may be used, but no cross-band operations are permitted.

4. Amateurs may operate on both phone and c.w. during the Contest (e.g. phone to phone, c.w. to c.w., or phone to c.w. and vice versa), but may submit an entry for one only of the above Sections listed in Rule 1.

An Open log will be one in which points are claimed for both phone and c.w. transmissions.

• The Federal Contest Committee of the Wireless Institute of Australia wishes all Australian Amateurs and Short Wave Listeners to participate in the Annual Contest which is held to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is held on the week-end nearest to 15th August, the date on which hostilities ceased in the South West Pacific Area.



Remembrance Day Contest Trophy

A contestant transmitting on phone, but receiving on c.w. must enter for the phone section (and vice versa). Refer to Rule 11 concerning entry in logs.

5. Only one contact per station per band is allowed and arranged schedules for contacts on other bands is not permitted.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

Contestants operating Club Stations other than their own shall be referred to, for the purpose of these Rules, as "substitute operators". Their operating procedure shall be as follows:

Phone contacts: Substitute operators will call "CQ Remembrance Day" followed by the call sign of the station they are operating and the word "log" followed by their own call sign.

C.w. contacts: Substitute operators will call "CQ RD de" followed by the group call sign comprising the call sign of the station they are operating, an oblique stroke, and their own call sign.

Contestants receiving signals from a substitute operator will qualify for points by recording the call sign of the substitute operator only.

7. Entrants must operate within the terms of their licences.

8. **Cyphers.**—Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of five or six figures will be made up of the RS (telephony) or RST (c.w.) reports plus three figures starting from 001 for the first contact and which will increase in value by one for each successive contact. If any contestant reaches 999, he will start again with 001.

9. Entries must be set out as shown in the example, using **only one side** of the paper, and wherever possible standard W.I.A. Log Sheets should be used. Entries should be clearly marked "Remembrance Day Contest, 1964" and must be postmarked not later than 20th September, 1964, and addressed to the **Federal Contest Committee, W.I.A., Box 638J, Brisbane, Queensland.**

Your log could help your Division to win the R.D. Contest Trophy.

SCORING TABLE

From \ To	VK0	VK1-2	VK3	VK4	VK5-8	VK6	VK7	VK9
VK0	–	6	6	6	6	6	6	6
VK1-2	6	–	1	2	3	5	4	6
VK3	6	1	–	3	2	5	4	6
VK4	6	1	2	–	3	6	5	4
VK5-8	6	2	1	3	–	5	4	6
VK6	6	1	2	4	3	–	5	6
VK7	6	2	1	4	3	5	–	6
VK9	6	1	2	3	4	5	6	–

Note.—Read table from left to right for points for the various call areas.

EXAMPLE OF TRANSMITTING LOG

Date/ Time E.A.S.T.	Band	Emission	Call Sign	RST Nr Sent	RST Nr Revd.	V.h.f. Bonus	Points Claim.	——

Note.—Standard W.I.A. Log Sheets may be used to follow above form.

EXAMPLE OF RECEIVING LOG (VICTORIAN S.W.L.)

Date/ Time E.A.S.T.	Band	Emission	Call Sign Heard	RST Nr. Sent	RST Nr Revd.	Station Called	V.h.f. Bonus	Points Claim.	——
Aug '64									
15 1803	7 Mc.	A3	VK5XU	59001	——	VK3XU	—	2	——
15 2345	„	„	VK8RU	56005	——	VK4YZ	—	8	——
16 1200	52 „	„	VK2OP	43028	——	VK8PA	25	1	——

Note.—Standard W.I.A. Log Sheets may be used to follow the above form.

10. Scoring will be based on the table shown.

In addition a bonus of 25 points may be claimed for the first contact in each call area on 52 Mc. or above.

11. All logs shall be set out as in the example shown and in addition will carry a front sheet showing the following information:

Name Section

Address Call Sign

Claimed Score

Declaration: I hereby certify that I have operated in accordance with the rules and spirit of the Contest.

Signed

Date

All contacts made during the Contest must be shown in the log submitted (see Rule 4).

Entrants in the Open Section must show phone and c.w. contacts in numerical sequence.

12. The right to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No disputes will be entered into.

14. Certificates will be awarded to the winners of the phone, c.w., open and receiving sections in each call area (Northern Territory and A.C.T. will both count as separate call areas). There will be no outright winner for Australia. Further Certificates may be awarded at the discretion of the Federal Contest Committee

The State to which the Perpetual Trophy will be awarded shall be determined in the following way.

To the average of the top six logs shall be added a bonus arrived at by adding to this average the ratio of logs entered to the State Licensees multiplied by the total points from all entries.

Example:

$$\text{Average of the top six logs} + \left(\frac{\text{Logs Entered}}{\text{State Licencees}} \times \frac{\text{Total of Points}}{\text{from all Entrants}}\right)$$

Acceptable logs shall show at least five valid contacts.

The Trophy shall be forwarded to the winning State in its container and will be held by that State for a period of twelve months.

Note.—The F.C.C. emphasises the need for strict observance of Rule 9 in the Transmitting Section and Rule 3 in the Receiving Section.

RECEIVING SECTION

1. The Receiving Section is open to all Short Wave Listeners in Australia, but no transmitting station may enter.

2. Contest times and loggings of stations on each band are as for transmitting

3. All logs shall be set out as shown in the example. Logs must show first the call sign of the station calling (not the station being called), the serial number sent by it and then the call sign of the station being worked. The scoring table to be used is the same as that used for transmitting and points must be claimed on the basis of the State in which the receiving station is located. A sample is given to clarify the position.

It is not sufficient to log a station calling CQ, nor is it permissible to log a station in the same call area as the receiving station.

For purposes of the Contest, VK1 and VK2 are considered to be the same call area, likewise VK5 and VK8.

4. A station heard may be logged once on phone and once on c.w. for each band.

5. Club receiving stations may enter for the Receiving Section of the Contest, but will not be eligible for the single operator award. However, if sufficient entries are received a special award may be given to the top receiving club station. All operators must sign the Declaration.

6. Awards. — Certificates will be awarded to the highest scorer in each call area. Further Certificates may be awarded at the discretion of the Federal Contest Committee.

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VK-ZL-Oceania DX Contest, 1964

This Contest will be conducted in October. The phone section of 24 hours will commence at 1000 GMT on Saturday, 3rd October, and conclude at 1000 GMT on Sunday, 4th October. The c.w. section of 24 hours' duration starts at 1000 GMT, Saturday, 10th October, and finishes at 1000 GMT, Sunday, 11th October. Full details will appear in the next issue of "A.R."

☆

5th All Asian DX Contest

1. Contest period: 1000 G.M.T. August 29, to 1600 G.M.T. August 30, 1964. (During the last week-end of August every year.)

2. Contest Call: Non-Asian stations call "CQ AA". Asian stations call "CQ Test".

3. Bands: The following Amateur bands may be used, 1.8, 3.5, 7, 14, 21 and 28 Mc

4. Type of Emission: C.w. only

5. Entry Classifications: (a) single band single operator, (b) multi band single operator.

6. Serial Numbers: (a) For OM stations: Five figures, RST report plus two figures denoting your age. (b) For YL stations. Five figures, RST report plus the two figures "00".

7. Point and Multiplier: For Non-Asian Stations: A contact only with an Asian Station will count one point and a multiplier of one for each Asian country worked on each band

8. Scoring: (a) The score of each single band is the total contact points on that band multiplied by the total number of countries worked. (b) The multi band score is total of contact points on all bands multiplied by the sum total of countries worked on all bands.

9 Awards: Certificates will be awarded to the following operators in each country: (a) For single band entry, the highest scoring operator on each single band; (b) for multi band entry, the three highest scoring operators.

10. Special Award: In addition, a souvenir will be awarded to the highest scoring single operator on multi band in each continent. Depending on the number of the contestants in each country, the contest committee will consider more certifications.

11. Reporting. All logs must be mailed to: J.A.R.L. Contest Committee, P.O. Box 377, Tokyo Central, Japan, to arrive not later than 30th November, 1964.

For sample log format and other info apply to W.I.A. Federal QSL Manager, Ray Jones, VK3RJ.

Publications Committee Reports . . .

From the 11th May to 8th June correspondence has been received from the following: 1JM, 1KM, 2AN, 2BZ, 2EG, 2WS, 2AKX, 3IT, 3UJ, 3WW*, 3AAU*, 3AFQ*, 3ZCK, 3ZFC*, 3ZGP, 3ZOM, 3ZTJ, 4NS, 4RW, 4ZBD, 4ZJB*, 5BB*, 5NN, 5PS, 5XB, 6NJ, 6RY, 6ZDB*, 7ZAS, L2211, L3042, Ian Phillips*. (Asterisk denotes technical article.)

The Committee noted that the VK5 Division agreed to omit the Divisional notes from their Bulletin and include them in "A.R." an action all readers will no doubt appreciate This will now mean that the VK5 scribe is, without a doubt, the most highly paid writer on the "A.R." staff, as the Publication Committee has no hesitation in adding another nought to his already magnificent salary.

The shortage of log books was discussed and it was agreed that an additional printing again be put in hand to overcome the current backlog of orders.

As no list has yet been forthcoming from the P.M.G. of new stations, change of address, etc., as required for the Call Book, it will mean that the new issue cannot be ready before August at the earliest.

The Committee have as yet not received the services of a volunteer editor for the sideband column, hence these notes are still omitted from the magazine. All readers are requested to forward notes to their Divisional correspondent for inclusion in the "A.R." Divisional notes column.

HAMILTON S.S.B. CONVENTION

THE recent Convention of single sideband operators at Hamilton (Vic.) was a great success, but it was not planned, it just happened. This was the first s.s.b. gathering in Australia, the idea for which grew from the fact that Bernie VK6KJ and his son, Kim, were coming East for a holiday in May and Bill VK5XB decided it would be pleasant to take them motoring to Melbourne via Hamilton, the home of three regular members of the 80 metre sideband "sewing circle" —Tim VK3TW, Ern VK3AEM, and Danny VK3ADD

The idea of a meeting at Hamilton on 16th May became so popular that the Hamiltonians soon discovered that they were organising a fully fledged, but unofficial, Convention with a buffet dinner on Saturday evening, followed by a technical session the following morning.

Dudley VK2DQ brought his facilities for producing a circular letter into operation some months previously and this resulted in a roll up of 42 sidebands plus twenty or so wives, friends and children, who converged on the Western Motel, Hamilton, by about 4 p.m. for the first "fixture," viz., contacts between the many mobiles present and the G boys—G3AOO and GI6GTK in particular. There was a regular procession of "long-whipped" vehicles to a large open field at the local Agricultural College, where they spread out to a mutual separation of several hundred yards and waited for "conditions" to become right, while Tim VK3TW acted as control station at his home QTH.

The said "conditions" did not become as good as was expected, so that the contest to discover whose mobile antenna system works best on 7 Mc. DX was rather inconclusive, however everybody made contact except for Lee VK3XO and Bill VK3AHT, who moved on up to 20 metres for a good contact with Ross WA6DEX (ex-VK5AJ), home again in Los Angeles after a brief visit to Australia several weeks previously

The main function was, of course, the dinner, which was such a friendly affair, and how could it have been otherwise as all present had spoken via radio but were discovering for the first time what the other bloke looks like, and whether voice, age and appearance in any way coincided with the mental pictures built up during the past few years. XYLs were taken to the local picture show, leaving the OMs all to themselves until supper time

The group photograph (see front cover), taken during the evening, is published to refresh memories and give readers of "A.R." some idea of the status and integrity of this august body of sidebanders.

It is interesting to note that the average age of the gathering is well and truly on the "shady" side of 40 years, and that more than half of them had built their own equipment, although many now use commercial gear. This represents a vast pool of radio experience—keen Amateurs who have run the whole gamut of radio from c.w., through a.m. and v.h.f., finally reaching the s.s.b. stage.

On Sunday morning, 17th May, a short technical symposium was held at the Bowling Club, when three speakers presented lecturettes, and morning coffee provided a welcome interlude.

Geoff VK3AC spoke on methods of eliminating ignition and other electrical noises in motor vehicles and came to light with some truly inexpensive, but effective remedies which have not been published previously.

Phil VK5NN gave a brief dissentation on linear amplifiers with the unit described in May "Amateur Radio" on display.

Arie VK2AVA concluded with an excellent outline of the recent trends in the development of s.s.b. transceivers, and had a "Galaxy" transceiver there on display, as a typical modern product of the U.S.A.

By midday all seemed to be going their various ways. The mobileers discovered, with some dismay, that conditions to G land were much better than they were the previous afternoon for the whip contest.

Our hosts at Hamilton—Tim, Danny and Ern—were all on the air on 80 metres during the evening to receive reports of safe arrival home, from the delegates

We thank them all for an enjoyable and memorable gathering, which has re-inforced the old, and made many new friendships in Amateur Radio.

NEW CALL SIGNS

MARCH 1964

VK2XI—D. D. Kinnersley, 22 Foxlow St., Canley Heights.
VK2AUQ—J. Barrett, 74 Orana Court, 355 Old South Head Rd., North Bondi.
VK2AXQ—J. F. Irvine, 1a Noonleinnl Crescent, Northbridge.
VK2AXV—T. L. Whateley, 118 Manchester Rd., Cymea.
VK2AZV—G. N. Webster, 45 Grantham St., Carlton.
VK2AZY—B. A. Taylor, 9 Kalrawa St., South Hurstville.
VK2AZZ—E. L. Koller 54 Memorial Ave., St. Ives.
VK2ZAZ—J. W. Carr, Lot 5, Mackay St., Nowra.
VK2ZGF—G. R. Felser, 17 Ingalara Ave., Wahroonga.
VK3DI—A. F. Meynderts, 662 Manneville St., Ballarat.
VK3QI—W. J. Guthrie, 17 Watsons Rd., Glen Waverley
VK3AHY—J. Vogel, S.S. "Yarrunga," C/o. The Australian National Line, 73 Riverside Ave., South Melbourne.
VK3AKJ—R. E. Jordan, 38 Gale St., North Aspendale.
VK3ZMK—R. K. Meadows, 18 Leigh St., Huntingdale
VK4EK—R. E. Grace, Borneo Barracks, 101 Wireless Regiment, Cabarlah.
VK4KI—D. L. Kinsella (Rev. Bro.), St. Collumbans College, Albion Heights, Brisbane.
VK4YW—G. Whitehead, 33 Fifth Ave., Bardon
VK4ZTA—T. A. O'Brien, 729 Brunswick St., New Farm
VK5BP—1st Gawler Scout Group, C/o. Mr. J. H. Duncan, 15 King St., Gawler.
VK5GY—T. P. Gardiner, Flat 5, 19 Fourth Ave., Ascot Park.
VK5MC—B. A. McRae, 24 Henry St., Port Pirie.
VK5MQ—A. G. Smith, 148 Yorktown Rd., Elizabeth Park.
VK5TU—A. Turton, 1 Wallira St., South Plympton.
VK5VB—V. N. Blackmore, 2 Yaralin St., Klemzig.
VK5ZFB—M. K. Gardner, 85 Regent St., Adelaide.
VK5ZHD—H. J. De Prinse, 20 East St., Hectorville.
VK5ZMC—L. N. Coventry, Lot 52, Creighton Ave., Morphet Vale.
VK6RT—J. P. Morgan (Rev. Bro.), C.B.C., Ellen St., Fremantle.
VK9CJ—C. W. Marley, Via Via Ave., Boroko, Port Moresby.

☆

Southern Rhodesian Radio Propagation Project

EXPERIMENTAL 80 Mc. BEACON TX

A small automatically-keyed transmitter has recently been installed on a prominent hill some 5,000 ft. above sea level and approx 1,000 ft. above the surrounding country, at a site 23 miles north of Salisbury in Southern Rhodesia.

The tx, which is running continuously, 24 hours per day, is unattended, but frequently monitored in Salisbury for correct operation The frequency used is 3.5,046 ks., and F1 keying (f.s.k.) is used to give an upward shift of approx 200 cycles per second on "mark"

The signal sent in Morse characters is 'QRA de ZE1AZC" and this is repeated continuously, with a 35-second break of carrier every six minutes to allow receiving stations to check no-signal conditions, and to adjust automatic recording instruments. R.f. power to the antenna is of the order of 40 watts, the antenna being a vertical quarter-wave, with four evenly-spaced horizontal radials acting as an artificial ground (known in Amateur parlance as a ground-plane antenna)

The tx, which is of unique design in that the r.f. section is built into the antenna itself is mains-operated, changing over in a few seconds to a petrol-generator supply in the rare event of mains failure

It is intended to keep this equipment in operation through the International Years of the Quiet Sun, and reports of reception in Cyprus, South Africa and Southern Rhodesia have already been received.

All reception reports on this beacon, which will be appreciated and acknowledged, should be sent to Ivan Wood. ZE3JJ, C/o. E.S.C., P.O. Box 377, Salisbury, Sth. Rhodesia.

VHF

50 – 144 – 420 – 576 – 1296 Mc.

Sub Editor: LEN POYNTER, VK3ZGP.
14 Esther Court, Fawkner, N.15, Victoria
ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

My apologies for the notes not appearing in the June issue. I went down with a bad cold just at the critical moment and that was that. So to the latest news from Interstate, as supplied by their correspondents, which you will see from their comments all v.h.f. activity is far from dead.

Channel 0 has cast its shadow on 6 mx activity here in VK3. The main source of activity is the 53.033 Mc. a.m. net and a few starters on the 52.525 Mc. f.m. net. Some activity has been observed off these frequencies but the biggest headache appears to be able to sort out the signal you are listening to from the various spots caused by Channel 0. From reports received so far, proximity effects are quite noticeable which invariably results in the picture disappearing from the screen when the carrier goes on, to horrible black bars accompanying any modulation. We have a slight period of grace until August 1, but after that the axe will be wielded.

It is felt that vertical polarisation will be of some assistance and some filters or traps are in the process of design and construction to observe what possible effect they will have on keeping us out of Channel 0 and getting only the t.v. signal in. One effort to date eliminated only the t.v. signal. Needless to say that wasn't so hot. For the time being it will probably put quite a few of the local 6 mx gang pretty close to the 54 Mc. end and running down towards 53 Mc. to minimise the problem. So tune high, chaps.

Of course in other States the problem will not present itself but the sound on 51.75 Mc. will prove to be the highest power 50 Mc. beacon yet used. We gather that the tx is now on full power and the signal available at one location is 12 db. up on its nearest rival. So look for the Melbourne gang high in the band and hope we don't become as scarce as VK8 was for so many years.

Keep an eye on 53.033 Mc. for signals and v.f.o. onto the frequency if you hear any signals there. Quite a few on this frequency can move both transmitter and receiver. Now on to the Divisional notes. Hope to hear something from the others soon. Keep up the good work and send in results of it.—3ZGP.

VICTORIA

432 Mc. has been very active in VK3. About 16 stations have workable gear; many contacts at the moment are cross-band.

The 6 mx nets on 53.033 a.m. and 52.525 f.m., and the 2 mx nets on 145.584 and 146.00 Mc f.m., are very active and more stations are coming on each week.

The VK3 Division V.h.f. Group are proposing to put a beacon on 145.00 Mc. If any other Divisions have suggestion for or against this proposal, they are asked to send them to the V.h.f. Group Secretary, Peter 3APJ

Melbourne chaps on 2 mx often listen for VK2s and occasionally hear them, but are unable to contact them, so VK2s try swinging the beam down south and call CQ VK3—we will be listening for you. 73, Cyril 3ZCK.

QUEENSLAND

Although it has been quite some time since any VK4 v.h.f. news appeared in "A.R.," we now hope that we will be able to keep you up to date on v.h.f. progress in the Sunshine State.

52 Mc.: Since the loss of part of this band, activity has somewhat decreased, but the band is by no means dead. We have missed a few of the regulars of days gone by, but crystals have been ordered and shortly we should see the re-appearance of many signals. We are expecting VK4WI to resume the Sunday morning news relay on 6 mx very shortly, so be in the call back after the news.

Sound from Channel 0 in Melbourne has been frequently heard here at good strength, but although we have had our beams in the south, no DX has been reported. However, Ted 2ZFS has been working into Brisbane on regular skeds at 0730 and 1930 E.S.T. to Roy 4ZRM, who has just put up a new 50 ft. tower.

However, I must report that at the present time there is more regular activity on 2 mx than on 6 mx.

144 Mc.: The v.h.f'ers have been quite active on this band lately. One evening there were nine stations working in three groups. There are fairly regular skeds between Brisbane stations and Bert 4CP in Toowoomba, John 4RZ at Gatton and John 4ZWB in Dalby. John 4RZ is State Co-ordinator of the Oscar III project and can supply a signal on 144.1 or 145.9 Mc. at the flick of a switch.

A tx hunt is held on the first Friday in every month and all that is necessary to participate is a 2 mx super-regen. and a beam.

For those wishing to start up on 2 mx there is always a signal on the band at 1930 hours without fail.

Higher Bands: Two stations that I know of do have 420 Mc. gear. Tom 4ZAL has completed a tx running 4 watts output and is about to start on a rx. Norm 4ZNS tells me that he and Ken 4ZKP are about set to work each other duplex on 2300 Mc. Their main worries are over and all that is needed now is a 30 meg. i.f. strip.

General News: The monthly meeting of the V.h.f. Group in Brisbane is held in the Social Services Building, Berwick St., Fortitude Valley, on the third Friday of the month at 8 p.m. This month a lecture has been arranged by the Group. The subject will be "Interference in Radio Communications" and will be given by a member of the P.M.G's. Department (Radio Branch).

Finally, I would add that any interested person is welcome to attend the v.h.f. meetings, irrespective of whether they have a ticket or not. If you don't know any Hams, come along anyway and ask for our President Mick 4ZAA, and he will be pleased to introduce you around. —73, 4ZPL.

SOUTH AUSTRALIA

52 Mc.: Activity here seems at a lower level than when we had the 50 Mc. allocation. No DX has been reported since the new band has been in use. We understand that VK3 chaps are having a good deal of trouble from Channel 0. A new station on 52 is Kevin 4ZED. Kevin is using an 807 and a 4 el. beam. The 52 Mc. scramble held on 3rd May was won by Bob 5ZDX. Bill 5ZD and Noel 5ZAS have been heard back on the band after some time. Geoff 5ZGF has some phase modulation working quite nicely on 53 Mc., and Darryll 5ZKY is working on an all-transistorised tx to run 10w input. This should be ideal for mobile.

General News: This month (May) was marred by the tragic death of Luke 5LL. Luke was often heard on 6 mx and was on v.h.f. back in the very early 6-mx days. A colourful and well known Institute member, he will be missed by many Hams, both in and beyond the Commonwealth.

Alf 5LA is now living in VK3 and is expected to take out a VK3 call sign soon. John 5ZDZ has been using a portable 432 Mc. converter and t.v. rx to copy the t.v. transmissions of Mait 5AO/T. Good signals have been received at distances up to 18 miles. The use of v.f.o's., especially heterodyne v.f.o's., is gaining popularity on 144 Mc. This may be an overture to Oscar III.

Bob Burns (5ZNH) has a 522 tx-rx going and is looking for contacts (144.1 Mc.). Bob is especially keen to make contacts around lunch time as the station is located at the Nailsworth Boys' Technical High School. Your conductor, Al 5ZCR, now has passed his c.w and will soon be signing 5EK. Mick 5ZDR is building a 4X150A tx for 432 Mc. 73, Al 5EK.

WESTERN AUSTRALIA

On 30th May an attempt was made on a 432 Mc. two-way contact over 162 miles between Bluff Knoll (3640 ft.) and Mt. Williams (1589 ft.). This is some 20 miles over the radio horizon. Bluff Knoll is accessible only by a three-hour climb by foot. Those setting up the station included 6LK, 6ZDW, 6ZBT, 6ZDT, 6DP and 6ZCF. Those at Mt. William included 6ZDS and 6ZDB. A 144 Mc. link was used to set up gear. (Unfortunately the results proved to be negative. Better luck next try. Thanks for the wire, 3ZGP.)

At the last fox hunt on 16th May, 11 cars chased three consecutive foxes, ending up at 6ZDM's for supper. At the last meeting three new Amateurs were present, 6ZEE, 6ZED and 6ZEG, and a not-so-new Amateur in 6AQ was elected to the Group. Finally a v.h.f. field day is scheduled for Sept. 13-14 and cross-band contacts count, so start mobilising chaps.

The beacons on 6 and 2 mx are running well and helping to set up gear for Oscar III. On this subject, 6ZCB has a pair of helices to set up on his tower and 6ZCM is busy assembling a new converter. 73, 6ZAG.

TASMANIA

144 Mc. Nothing extraordinary to report. New station on in Hobart is Tom 7AL, President of the Tasmanian Division.

52 Mc.: Nil activity, in the south at least, except for the broadcast of the notes for 7WI. We hope everyone will have their gear converted to the new band by the winter DX season. John 7ZJG should be a new station on the band by this time.

An idea is afoot to instal a repeater on Mt. Wellington, 4,168 ft., to work in conjunction with a 52 Mc mobile net. This would be the first step towards State-wide coverage by v.h.f mobiles. The next step would be the installation of a similar unit in the north, on Mt. Barrow, 4600 ft.

The annual meeting of the V.h.f. Group in May resulted in the election of the following: President, 7ZAK, Vice-Presidents, 7ZAT, 7ZB, Secretary, 7ZAQ, Broadcast Officer, 7ZAX, Correspondent, 7ZAQ; Activities Committee, 7ZZ, 7ZOO, 7ZJG, Research/Records Officer, 7ZAS. 73, 7ZAQ.

D X

VP4, OA4, BV, ZM7, 7G1, FP, AC5, MP4, ZC6, TY2

Sub-Editor: H. A. BEHENNA, VK5BB,
14 Stanley Street, Crystal Brook, South Aus.
ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

The last month has seen much more activity on the DX bands according to reports received by the writer, and most contacts are glad to report a rise in the number of VK signals heard. Please let's keep it that way

160 Metres Phil 5NN reports that he has contacted, along with 3BM, ZL4LZ s.s.b. to s.s.b.; ZL2APJ on a.m. to s.s.b. W6VSS is also looking for contacts on this band. He has a very good signal and if on should be heard around 1880 kc. A sked with W6VSS was made for 12th April, and for several overs, reports of 5 by 5 were exchanged, from 0900-0830. Walc W6VSS used a 100 ft. tower and Bruce 3BM a 126 ft. vertical, supported on wooden insulators 10 ft. above ground, with 16 radials each 126 ft long fed with 52 ohm coax. Bruce also says he is build.ng a rx for this band only and urges all interested to prepare themselves for the next season, Sept.-Oct. On Sat., May 30, he had a test with W1SWX on s.s.b. and received S2 from near Boston Bruce says that those who are possibly interested in this DX band should check on the A.R.R.L. for the power allowable in the different parts of the U.S.A.

80 Metres. No reports for this band received, but if the local contacts are a pointer, it appears very unstable at times.

40 Metres: Appears to be waning towards G land during the afternoons, whilst from around 0930z the W signals are workable for a couple of hours. From 1000z a few KR6, DU and JA sigs are getting through and are possibly getting stronger Due to the QRM on this band, it is harder to make one's presence felt With 20 metres fairly well down during the early evening, it might be an idea for those interested to notify the nearer FK8 and VR stations that quite good copy can be had on 40 metre band. Bruce 3BM reports that Arie 2AVA, while visiting Bruce's QTH, contacted WA2SFP on 7 Mc. s.s.b., long path, at Q5 S6. Jim claims this is the first long path contact on phone; the time approx 2130 on 15/5/64. On the 18th this was repeated. On 20th at 2300z they worked again at Q5 S7 At 0000 the report was Q5 S4. WA2SFP uses Telrex Bertha which is a full size 3 el. on 40 up 85 ft. Bruce on 40 uses S line and feeds into 840 ft. vee beams, 75 ft. high at apex, sloping to 40 ft. at the open ends. Arie since returning home has also contacted WA2SFP on the long path 40 mx s.s.b. possibly on the 20th May Tnx Bruce.

20 Metres During the mornings on most days around 0130z, good signals on a.m. and s.s.b. from the South American continent, although at this time the band seems to be open to W for them which doesn't improve our chances from here. From 0300z the central to north Americans with VE are there in their droves until approx. 0700z. Thence to KH6 and the associated islands of the Pacific. Exceptional signals are noted from KL7 at 0800z. The African continent is also heard during the p.m hours here daily and some of the exotic calls are putting in very good signals to VK. On some nights U.S.A. can be heard calling at about 1100z, both a.m. and s.s.b. 1230z brings a few more Ws who are looking for a quicky before going to work for the day.

15 Metres I am amazed at the lack of activity on this band, whether t.v.i. is the main cause or not. However, a.most every day sigs from W are loud and clear with no QRM as on 20 mx. From 0330z-0500z signals are particularly good, but as I said there are only a few using it

10 Metres Garry 5ZK reports conducting one-way tests on this band with VS1LS on 16th of the month, and VS1LS reported Garry's signal 4 by 5. Garry also says that he received from W6JRY 5 by 5, but as he states he regretted that he had not finished his new 10 mx converter. Sounds very promising anyhow, tnx old boy.

ACTIVITIES

Ken 3TL reports that the biggest change at his QTH is the signals from the VE stations, which he says are of surprising strength. Ken has also worked the following stations: 14 Mc phone—FG7XL, HZ2AMS/8Z5, VE7RN, VP6KL, VS5LX YN1LC, ZS7R (Swaziland), 6M5MJ, 6F5UC 14 Mc. c.w.—CR7IZ, FB9WW (Crozet), FB6YY, FR7ZD. HZ2AMS/8Z5 VE7RN, ZS7R, 5R8AI QSLs received, KG2BX, CT1CK, CO-2HS, HC1HL, M1B, TG9RJ, VP8GQ, PZ1AX, VP1TA.

5ZC, with the installation of a 3 el. G4ZU, but at the moment fixed on stateside, reckons the band is open all the time, reports working the following: W6HLH, W2CYS, W6CBP, W6FDL, W6EKN, WA6UZB, W9SKR, W9KIT, K8IKB, K6BIA, HB9MQ. Tnx Al. Also on 40, Al holds a nightly sked with W6ULS.

Pete 5FM and myself the following: All 14 Mc. s.s.b.: XE1PJ, VE6TDJ, W7WLL, W7DXK, XE2LV VE1CE, W0PI/KM6, W4GD, WA8OET, W7AHM, K7VCF, W0HTH, W5KAE, XE2PUN, XE2QE. A cubical quad needing attention has restricted the activities of the writer

Garry 5ZK reports a fairly quiet month on the DX scene, although he appears to be carrying out some experiments. On s.s.b. 14 Mc. he has worked VS1JJG (0400), OA4PI (0418), HC8FN (0530), VE3AH (0915), UA0KIF (0915), VE7TD (0700), 6Y5MJ (0445), XE1CCW (0430), KL7DXK (0815), HK1ZU (0230), VP9OC (0400). 15 metres a.m.: ZS1CD (0830), W2-3-4-5-6-7-8-9-0 (0100 to 0500), 6Y5LT (0300), VS1LV (0315), ZS6AGU (0700). Also some Ws on s.s.b.

[redacted]

JA6BAY can be heard nightly on 40 mx calling CQ on s.s.b. with a good signal from 300w at approx 7 1 Mc. 1000z.

FK8AU with VR2EQ heard on a.m. on 7080 at 0830z with sigs 5 by 5-8.

1030z UA0KKA shows up calling CQ with 5-8 on a.m., generally without much success —on 14 Mc

VE7MD reports he has a 3 el. beam atop a cedar tree, which he has now topped and the structure will now remain at the 90 ft. level.

6Y5RD heard working with a queque on 20 mx s.s.b. at 0630z.

W0PI/KM6 puts in a beaut. sig from Midway from 0600-0830z on 14340 kc. A well travelled gent and appears interested in most subjects.

VK4JQ heard getting rid of a few QSLs to the VE fraternity on 14 Mc. s.s.b. from Willis Island.

W.A.Z. chasers are advised that UA0GF is on s.s.b. in Zone 19, and VE8RN is in Zone 2. (VK3TL)

FB8WW is quite active on about 14140 with a S7 note from Crozet Island. (VK3TL)

K2US at the World's Fair reported they are looking towards the VK-ZL area for contacts on 14 Mc. s.s.b. For card gatherers theirs should be a winner

QTH CORNER

BV1USB—Custodian, 6214th Tac. Grp., APO140 C/o. P.M. San Francisco, Cal., U.S.A.

CE1AO—Abel Larenas T., Boquedand 460, Antofagasta.

CO2WT—Francisco Fonseca, Neptuna 902, Havana, C.

CP1CP—Imar M. Benitez, P.O. Box 2250, La Paz.

CR4AE—Flavio A. Da Cunha, Santiago, Praia C.V.I.

CT3AL—Jose Vieira, Av Zarco 14, Funchal.

DJ1BB—Erich Chowles Klosterstra, 1, 22C Derschlag.

EA8AZ—Lorenzo Munar Pons, Marques La Cenia 28, Mallorca.

EA8BF—Manuel Cenalmor Montero Aerodrome Los Rodeos, Tenerife.

EL3D—James A. Barnard, Owensgrove, P O. Box 33, Harbel.

F3LJ—Georges Girault, 3 Rue Victor Hugo, Bauge, Maine-et-Loire.

G6DJ H S. Urch, 10 Farington Rd., Henleaze, Bristol.

GM6RV W L. Vinicombe, 6 O'Connell St., Hawick, Roxburghshire.

HC4YS—Oswaldo Santosch, Malecon Y Ante 103. Bahia De Caraquez.

I1CWO—Giovanni Piazzo, via Domodossolla 75, Torino.

JA1ANZ—K. Nagasawa, 3642 Sakura, Kumagaya, J.

LA6EF—Einar Dons, O. Delhi Gaard, Askim, N.

OA8L—Luis Meza D. Raymondi, 586 Pucallpa, Loreto, P.

OD5LX—Ted S. Truskowski, P O. Box 1217, Beirut.

OE1HV Hansgerd Volgsang, Gonzagagasse 9/17, Vienna 1.

PA0HI—H Wigt. Laurens Reaalstraat 8 Bis., Utrecht.

PJ3AA—Sjoerd Heeringa, Dakota Airport, Aruba.

TF7SF -Siguron F. Jonsson, Holagata 29, Vestmanbaey, Jar.

VE8RX—George T Kondo, C/o. Dept. of Transport, Portsmith, N.W T

XE2QG—Jose R. Tristan, Escontria 55, San Luis Potosi, S.L.P.

YU1GS—Mario Vidov, Vojvode Misica 29, Belgrade.

XW8AL — Houmphant Saignasith, Statistics Dept., P.O. Box 115, Vientianne.

YN1CJ—Jose Cespedes, P.O. Box 223, Managua, N.

ZS3AC—M. D. MacGregor, C/o. C.D.M., Oranjemund, A.

5R8BI—Jean P. Hardy, C/o. S.I.C.E., Antsirabe, M

4X4YL—Drora Friedman, Hakhaluts St., Ness Ziona, I.

3U7AB—Rene Tuaira, Garagiste, Maradi, N

9N1SM—Samuel Mazza, via U.S.O.M./N , APO 143, Box Kat, San Francisco, Cal. U.S.A.

6W8CK—Paul Raigne, P.O. Box 971, Dakar, S.

9U5VS—R. Van Santfoort, C/o. Minetain, P.O. Box 62, Kigali, Rwanda

9K2AN—Nasir Khan, P.O. Box 68, Kuwait.

9G1DI—R. Koehler, P.O. Box 1981, Kumasi, G.

8O2RL—H. R. Lemmon, P.O. Box 164, Berbera.

Summarising the band habits, not two days in a row can you go into the shack and know for certain that you will work the same DX station today that you worked so well yesterday at S9. Figures quoted are times of maximum signals to be received at the times quoted. Thanks to those that have their names listed above. Their notes and reports are greatly appreciated by yours truly. All times quoted are GMT unless otherwise stated.

73, Bert VK5BB.

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ZL1ALG PASSES ON

In a letter from Tony Grey in New Zealand, I was sorry to hear that his Dad, Chas Grey, ZL1ALG, had passed away during February of this year. The familiar call was no doubt worked by many in VK who shall be sorry to hear of his passing on. The late Chas. Grey had been ill for some 18 months.—Chas, Abernethy, L2211.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown

PHONE

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK5MS	24	306	VK6KW	4	211
VK3AB	45	301	VK3WL	14	211
VK5RU	2	300	VK2JZ	61	211
VK6MK	43	291	VK3ATN	26	204
VK3AHO	51	284	VK4HR	12	192
VK4FJ	31	278	VK4RW	21	188

New Member:
VK2APK 64 128

C.W.

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3KB	10	320	VK6RU	18	260
VK3CX	25	303	VK3ARX	66	242
VK3QL	5	301	VK3AHQ	79	241
VK4FJ	39	296	VK3XB	75	235
VK2NC	19	288	VK3YL	39	231
VK2AGH	71	269	VK5RX	23	230

Amendments:

VK3RJ	42	218	VK3KS	74	177
VK2APK	78	210	VK7SM	72	160

OPEN

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK6RU	8	306	VK2NC	77	287
VK4FJ	32	305	VK3HG	3	274
VK2ACX	6	300	VK3JA	43	252
VK2AGH	83	296	VK7LZ	23	242
VK6MK	74	293	VK4HR	7	233
VK3AHO	76	287	VK3BZ	4	231

Amendments:

VK2APK	82	317	VK7SM	84	171

S W L

Sub-Editor Chas. Abernethy, W1A-L2211
30 Urunga Parade, Miranda, N.S.W.

It has been a long time since I have had such a pleasant task to perform as the one which falls to my lot this month. For a long time S.w.l'ing has been at a low level in this country, due possibly to lack of interest, lack of publicity, and lack of co-operation between the listening groups in the various States. Publicity is an art, and one attribute of a good publicity man is to believe in what he is publicising as well as being active in that field. This month sees one such man taking over the sub-editorship of the S.w.l. page. The term sub-editor sounds rather formal and unfriendly, but in Chas Abernethy I feel sure we will all meet a man who is dedicated to his job, one who is always prepared to listen to the other fellow's idea and a friend who is anxious to see listening take its place as a united effort of the various States in the interest of Amateur Radio and the W.I.A. in general. My acquaintance with Chas has been short, but in the time I have known him I have come to respect him and his opinions, and feel sure that our listening members will rally around this new spokesman as he looks after our interests. On behalf of the boys, Chas., I wish you all the best in this task, and assure you of my full co-operation in your work.—Don L2022

* * *

Well chaps, as from this issue I shall be your scribe for a term, and trust that I can continue to do as good a job as previous writers of our page. Assistance is essential, so it would be appreciated if S.w.l's. in various States would contribute their piece to keep our page intact.

The VK-ZL-Oceania Contest will be held in October of this year—3rd and 4th phone, 10th and 11th c.w. The Jamboree of the Air again during October, whilst Oscar III. is expected to be in orbit during August. Watch "A.R." for rules, and other particulars.

A.M. PHONE RECEPTION

In reception of a.m. phone signals the normal procedure is to set the r.f. gain and i.f. gain at maximum, switch on the a.g.c., and use the audio gain control for setting the volume. This insures maximum effectiveness of the a.g.c system in compensating for fading and maintaining constant audio output on either strong or weak signals. On occasions a strong signal close to the frequency of a weaker desired station may disappear because of reduced gain. In this case better reception may result if the a.g.c. is switched off, using the manual r.f. gain control to set the gain at a point that prevents blocking by the stronger signal.

When receiving an a.m. signal on a frequency within 5 or 20 kc from a s.s.b. station it may be necessary to switch off the a.g.c. and resort to the use of manual gain control, unless the receiver has excellent skirt selectivity. No ordinary a.g.c. circuit can handle the syllabic bursts of energy from the sideband station, but there are special circuits that will.

An undesired carrier close in frequency to a desired carrier will heterodyne with it to produce a beat note equal to frequency difference. Such a heterodyne can be reduced by adjustment of the phasing control in the crystal filter. A tone control often will be of help in reducing the effect of high pitched heterodynes, sideband splatter, and noise by cutting off the higher audio frequencies. This like sideband cutting with high selectivity circuits reduces the naturalness of the signal tone.—Sid L2258.

NEW SOUTH WALES

At the April meeting it was decided to present a shield to the winner of the VK2 section of the R.D. Contest. This shield, suitably inscribed, is to be held for twelve months. A replica, to be kept by that person, would also be awarded. So get your gear ready for this Contest, as we would like to see all S.w.l's. submit a log.

The VK2 QSL Manager has kindly offered to send me all Inwards S.w.l. QSL cards for distribution. S.w.l's. expecting cards are asked to send a 5 x 4 envelope (stamped and addressed) to my QTH.

Don L2022 reports that there is no activity on 10, but plenty of good DX on 20, 40 and 80 metres with occasional good breaks on 15. He has logged ZB1BX, YO8CF, ZE3KI, UI8OA, CT1VB and CE4OC. Congrats on passing your service exam.

Russell L2261 is now mobile with a 6/9 Command rx with an 8 ft. whip. His home rx is a Philips No. 4. Be interested to hear of your mobile doings Russ.

Sid L2258 is having quite a ball with his AMR300. As his letter shows, an impressive list of DX received, which is too numerous to mention, nice going Sid.

Ross L2290 has received his call VK2ZKB and hopes to be calling CQ in the near future. No doubt there shall be quite a few S.w.l's. listening for you OM.

Henry L2271 has been in hospital, but is well on the mend now. He is concentrating on c.w. reception as it is good practice for future events.

Chas L2211, no listening at this QTH of late, too busy answering mail, but has received cards from YV5, JA3, VQ4 and 4X4BL.

Arnold L2291 lives at Broken Hill and uses an A.W.A. s.w./b.c. rx, on 14 Mc. has heard 32 countries, which is very good for a rx of that type. Nice going OM.

VICTORIA

Mac L3074 spent his last week-end with the VK3 boys at the Convention at Traralgon during April. He was married in Sydney in May and now lives in that area. We all wish you and your XYL every happiness Mac.

Greg L3138 has not done much listening of late owing to studies, but has received cards from ZS6, TG9, YV1, FO8, DL3, SM3, HK3, GI6, UA4, UT5, UI8. Nice work Greg. I shall pass your remarks on to Mac.

Peter Curran lives at Plenty and as a.c. is not available, uses transistor rx with quite good results. Being on a farm, Peter has plenty of space for antennae.

QUEENSLAND

Bill L4401 suggests that S.w.l's. write to one another of their doings. This seems quite a good idea as it would tend to bring one closer to fellow members. Bill uses a home-brew rx and a long wire aerial.

Lew L4020 has not been listening much of late, but is erecting a new aerial system which he hopes will improve receiving at that QTH.

Graham Shaw uses a Hallicrafters S38 rx and has only been S.w.l'ing for three months, during which time he has logged 29 countries.

SOUTH AUSTRALIA

Alan L5085 is a very keen S.w.l. and although in a noisy location seems to be doing all right so far as DX is concerned, with 106 countries to his credit. Alan uses a G5RV antenna.

WESTERN AUSTRALIA

Peter L6021, sorry I cannot help you re the Bulletin that you mention, maybe some of the VK3 boys can assist you in the matter. I would be grateful if you could let me know of your doings from time to time.

Copies of a simple circuit for a b.f.o. which can be added to your set, plus an explanation, are available. Also a time conversion chart. These can be had by request, but don't forget the stamp to cover postage. My address is 30 Urunga Pde., Miranda, Sydney, N.S.W.

To hand is a QSL card for RA 3876. It came via the VK2 Bureau and I'm trying to find an owner.

That's it for this time chaps, and I would like to thank those S.w.l's. who have written to me and trust they shall continue to do so. 73, Chas L2211.

S.W.L. DX LADDER

	Countries Conf.	Countries Hrd.	Zns. Conf.	S.s.b. Conf	S.s.b. Hrd.	W Stat.
E. Trebilcock	283	289	40	—	—	80
D. Grantley	113	274	36	30	104	35
P. Drew	94	237	30	44	200	27
A. Westcott	93	150	31	9	107	11
M. Hilliard	86	225	33	34	168	12
M. Cox	80	232	31	49	163	21
G. Earl	60	150	36	33	137	6
C. Abernethy	50	102	33	—	—	—
N. Harrison	44	119	29	4	30	35
I. Thomas	42	138	30	16	97	14
A. Raftery	14	106	15	—	—	—
R. Oats	9	28	8	—	—	—

YOUTH RADIO CLUBS

The best of the news this month is from VK3. Ken Matchett recently had the pleasure of presenting well-earned Elementary Certificates to Frank Wrobel, Greg. Smith, David Hardiment, Danny Hughes, Theo Todariv, and Joe Camerleri all aged 10 or 11, at Gowrie Park State School. This is the first time in Australia that boys at primary school have qualified for the Elementary Certificate. Hearty congratulations to the boys, and their instructor, Bill Allen—not forgetting the head teacher, Mr Fish, who can see the sense of this. This should open up a new line of thought for other Divisions, as well as other potential club leaders in VK3. There has been a case, I believe, of a Novice Licence being granted in the U.S. to a girl of 9 years of age. There is no doubt that a great number of boys (and girls) from 9 to 11 are capable of understanding elementary radio. Any Divisional Council that is really serious about Y.R.C. should make plans to lure not only high school teachers, but also primary school teachers. Why not at least a free A.O.C.P. course for any teacher who leads a Y.R.C.? "Use a sprat to catch a mackerel" with apologies.

Another heart-warming piece of news from VK3 is the starting of a radio club at the Royal Victorian Institute for the Blind in Burwood Road, Burwood. The instructor is Mr Bruce Whitehead. Ours is a wonderful hobby for the physically handicapped, and everybody knows of the cases which prove that blindness is no disqualification. Here is another line of thought for each Divisional Council. What can be done for the groups of physically handicapped young people?

You hear of Export Action on T.V.—Well, we're doing likewise. Latest news is that the R.S.G.B. has formed a committee to instigate our scheme and recommend on starting a similar one in U.K. Fullest details of our Y.R.C. have been sent to the General Manager of the R.S.G.B. and results will be interesting. Meanwhile the New Zealand A.R.T. have put Youth Radio on the agenda for this year's Convention—results also may be interesting.

We're very pleased here that two present members of our Lyneham High Y.R.C. are conducting the Saturday and Sunday transmissions for the Slow Morse Session conducted by VK2. They are Roger 1RD and Jim 1JR. They are carrying on the tradition of helping others just as they were helped.

Two active clubs I have heard of are at Homebush High (Sydney) and Christmas Is. Elementary Certificates at Homebush to P. Logan, A. Coote, I. McKechnie, D. Kavanagh, J. Cole and K. Ambler—to whom, congratulations.

On Christmas Island, they're having a lot of fun. Don Reed (ex-VK2DR, now VK9DR) has some ideas which should be of value to other leads. With Alan VK9MD and secretary Mr. K. P. S. Menon, he organises working circuit displays on peg-boards. This enables you, with many pieces of equipment, to have the simple idea of regarding the circuit diagram as a plan photograph. Breaks can easily be made to obtain multi-meter readings. Incidentally, they got more members because most visitors to their Field Day were fascinated by the pile-up of other countries wanting them as rare DX. The list of Elementary Certificate names is interesting. Ch'ng Kee Thuan, Ronald Ashley, K. P. S. Menon, Patrick Leong, Ivor Robless, Ahrone bin Arippin. More congratulations!

Calling VK7! (If you haven't been sunk. Haven't heard from you recently.) I had a chat with your Director of Education here in Canberra recently. He was quite interested in Y.R.C. Can you enlist him in the cause? —73, 1KM.

The Institute Badge
may be purchased from your
Divisional Secretary

FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL

AMATEUR ADVISORY COMMITTEES—1964

New South Wales
W. L. Woolnough, VK3GW
L. P. Gerity, VK2KT
N MacNaughton, VK2ZH
G. G. Hall, VK2AGH
B. H. Anderson VK2AND
L. McMahon (Dr.), VK2AC.

Victoria
R. A. C. Anderson, VK3WY
F. P. O'Dwyer, VK3OF
N. L. Storck, VK3ZO
R. J Richardson, VK3ZP.

Queensland
D. M. Portley (Dr.), VK4DP
S. D. P Smith, VK4LA
L. B. Blagbrough, VK4ZGL
C. I Patterson, VK4YP
S. R. Baxter, VK4FJ
R. Collins, VK4XK.

South Australia
H. M Blythe, VK5CL
R. H. Richards, VK5DO
L. D. McKenzie, VK5ZLM
E. B Stephenson, VK5ZB.

Western Australia
J E. Rumble, VK6RU
R. Chamberlain, VK6RY
G. S. Byass, VK6ZDS
V. J Kitney, VK6VK
L. G. Rock, VK6LR
A. Parkes, VK6MO.

Tasmania
T Allan, VK7AL
I Nichols, VK7ZZ
E. Beard, VK7EB
W Nisbet, VK7BN
D. Thorne, VK7ZAI
G. D'Emden, VK7ZAS.

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FEDERAL AWARDS

D.X.C.C.: The following are new and separate listings:—

FB8—Crozet Is.
4U1—I.T.U. Geneva.
8Z4—Saudi Arabia-Iraq N.Z.
Amend prefix 9K3 to read 8Z5.
Cancel listing of C9.

—A. Kissick, VK3KB, Manager.

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FEDERAL QSL BUREAU

Bar CR8AD advises that he is closing down from Dili around end of May and returning to Lisbon.

UB5ARTEK, often heard in VK over the past three years, is the Radio Club of the Lenin Pioneers Camp, Artek, U.S.S.R. Artek is located on the Crimean shore of the Black Sea and the Camp was established in 1958 and each summer the Camp is populated by 1,500 teenagers from the different republics of the U.S.S.R.

The L.R.E.M. of Mozambique advises details of a Contest to be held from 0001z Saturday, 1st August, to 2359z Sunday, 2nd August. Only contacts with CR7 will count and all bands and modes may be used. Full details from this Bureau.

The "Scout Radio Award" has been founded by the Scout Radio Club, Copley, Penna., U.S.A. Contact has to be established with the Club station K3WQW and with one additional member Full details from this Bureau.

Am happy to chronicle that at date of writing (3/6/64) well known Radio Amateur and personality, Jim Corbin, VK2YC, is making steady progress towards recovery from a severe coronary attack in April. After a spell in hospital, Jim is now convalescing at home. With further rest and "cutting his cloth to his measure," Jim should get by for many years.

Australian results of the 4th All Asian DX Contest held 1963 are: VK5NO 7170 pts., VK-3EO 1177, VK3AXK 900, VK2RA 103, VK2APK 712, VK4SD 483, VK2DI 196, VK3RJ 55, VK3IT 43 pts.

Alan Smith, ex-VK2AIR, ex-VK2AYY and VK9YY, advises he is now on from Kuala Lumpur and signing 9M2YY. Alan expects to make trips to HS and HM shortly.

The J.A.R.L. advise that they propose to give a warm reception to any Hams who are visiting Tokyo as members of the Olympic teams. They will also welcome any other Ham visitors during the forthcoming Olympaid.

—R. Jones, VK3RJ, Manager

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NEW SOUTH WALES

HUNTER BRANCH

Thirty-three members, associates and visitors were present at the June meeting of the Branch, held on 5th in the Technical College. The lecture, entitled "Top Band—Without Tears," was delivered by your scribe, Keith 2AKX, ably assisted by Arie Oosterveen. The lecture concerned easy methods for 160 mx and there are spare copies of the notes for the asking—usual address, VK2AWX, Bolton Point.

Also at the meeting a tape was played of an interview between Peter Couchman, of the A.B.C., and Susan Brown, VK2BSB. This was considered by all to be very good publicity for the cause of Amateur Radio and especially for Susan who has the distinction of being the first schoolgirl holder of the A.O.C.P. She has had several contacts on 80 with local and not so local stations, but because of impending examinations for the Leaving Certificate, is wisely restricting operations. However, Susan will be on for an hour or so each week on 160 metres. The signal is very good, so please give her a call if you hear her. Jan Oosterveen, who passed the examination at the same time, has not yet received his call sign, but as soon as he does he will be on 160 as well, looking for contacts. Naturally he hopes for VK2BJO. With Bill 2ZK, Geoff 2VU and Stan 2AYF there are now six Branch members on the Top Band. It is hoped that many more of the local chaps will take advantage of the excellent winter fade-free conditions and join us on 160 for 100 per cent. QSOs.

David VK2ZXA has managed to get some days off during the month to visit all his friends in Newcastle. He has busily copied down many of the circuits in the 2AWX library, so it could be that he is studying up for the Morse and the full ticket. There are rumours also that another member of the v.h.f. fraternity is secretly taking Morse instruction —more of this later.

David 2GF is not quite so happy since he read his call sign in the New Calls section of last month's "A.R." The point is that it was listed against the name of another Amateur No doubt by this the error will have been rectified, but it could have been embarrassing had they met on the air. There's one thing certain, this sort of thing could never have happened to Sherwood, he's never on the air. [This unfortunate occurrence was the result of incorrect copy supplied by the P.M.G. Dept. It is presumed that the call sign should have read VK2ZGF, not VK2GF.—Editor]

It is pleasing to report that the Cessnock Club 2AXC is now fully operational in the Civil Defence Hdq. in Main Street. The boys have an AT21 and some other powerful gear so signals should not be hard to receive from that area any more. Chris. still manages to put 2PZ on the air on Monday nights during the call backs and he has, with the help of Nev. Woods, moved several crates to make more room in the shack.

One of the best known of the old timers, Bill 2CW, has been a regular attender at recent meetings and it is good to see him back, especially as he expects to be on the air again within a few weeks. From Ron 2ASJ at Stockton comes the news that Bill 2AMM also is making a comeback and that Ron himself is in fine form. For those who are DX keen, ZP5AA, who is a friend of Ron's, is looking for VK contacts so here is your chance to get another country. Those who have not met up with Ron and 2nd op. Jack should look for them on Tuesdays either on 40 or 2 mx. If Max 2ZMO is around he will help you with more information on their haunts in the band.

Never place your trust in false prophets or for that matter false aerial halyards for if you do you may find that when you return from holidays the lovely aerial farm of a fortnight before is but a tangled wreckage on the deck. By the way, Frank 2APO now has a much improved aerial mast design, using nylon halyards!

Fred 2AEE is hiding more than his light under a bushel so it seems when one hears of his hidden aerial, 60 feet high and 700 feet from the shack. No wonder we can't see it from the road! Les 2RJ is training the new infant in the gentle art of the RJ whistle or that's what I was told. Stuart 2AYF has now completed the grand operation "get the car in the shed" and has sold the rusty one for a Mini. Won't that look good with a Top Band whip. Varley 2SF was at the meeting also last time and he hopes to be on soon. Tony 2ZCT made no rash promises, but we're waiting. Bill 2ZWM is making time to either give up smoking or get the c.w. and I think the c.w. might win this time.

I hope you haven't forgotten that Uncle Sam's birthday is one day after the next meeting and that on this occasion Lionel 2CS will be describing his crystal locked rx with the tuneable i.f. So come along on the 3rd to room 15 (or room 6), semicircular building, Newcastle Technical College, at 8 p.m. Oh! and bring your tax return! 73, 2AKX.

CENTRAL COAST ZONE

The Gosford Radio Club is grateful to Keith 2ZAU for an excellent lecture on Communication Receiver Design The number of circuits illustrating the talk was very great and most of them should find their way into our scrapbook. Keith 2AKX also gave us some interesting sidelights on the Adelaide Easter Convention, at which he was an observer. Wally 2AXH had a couple of weeks in Concord Hospital recently concerning a poisoned finger It is with pleasure we announce that both Wally and the finger have left hospital in one piece, better than expected at first. Quite a few Hams were able to call and cheer him up during his stay. Ernie 2EH is busy on c.w., house-painting, and stereo amplifier construction. Alec 2AAK uses number 8 fencing wire strung across the landscape Shortly a familiar audio signal will agitate its molecules—no r.f. involved however, it's just Alec's method of getting on the twisted pair. A 4 by 13 element Yagi array is under construction for 432 megs.

Mona 2AXS featured with three other YL Hams in the evening paper recently They were 2AIA, 2AOK and 2MR. That's half of the YL Ham population of this State, I believe, and they gathered at Hebe 2AOK's home to lay plans for further YL meetings. I believe they have designs for converting other Ham XYLs into fully fledged operators.

Harry 2LK is active on 40 mx mobile and 20 mx DX, both on the Swan 240. Major 2RU is also on 40 mobile with the HW22. Bob 2IN has re-appeared on 40 phone (a.m.) from Killarney Vale Your scribe has had some good contacts on 20 mx with VK0GS at Wilkes, using a 40 mx (fixed) quad. Has anyone else tried using a quad on its second harmonic? A new crank-up mast with the regular 20 mx quad should shortly improve the DX position. 73, 2ON.

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SILENT KEY

It is with deep regret that we record the passing of:—

VK5LL—G. F. (Luke) Lucas

QUEENSLAND

Monthly news reports from this Division have lately been very conspicuous by their absence. Efforts are being made to overcome this and it is hoped that news from this Division will appear with greater regularity than in the past.

Divisional Council News. The last Council meeting was held on 7th May. Reports were received from the councillors on their various activities. Our disposals officer, Paul, presented an important report. He has high hopes of obtaining coil boxes for the batch of AR7s

he has for disposal. When these coil boxes are to hand, the AR7s will be offered for ballot in the usual way.

By invitation, Chas 4UC was present at the Council meeting and he submitted an informative report to the Council on his activities to date. Chas has not been at this task very long and the results of his efforts so far show that his enthusiasm is of the utmost. He has established a Youth Radio Club at the school at which he teaches. The club operates under the call sign 4RP. He hopes to have another station operating in close proximity in July and enquiries about how to start a Youth Radio Club have come to him from several parts of the State. To his efforts we wish every success.

It has been decided to have a Divisional Dinner this year. To attract as many country members as possible, the date has been set for Friday of show week, 14th August. Members are asked to keep this date in mind and to come along in strength.

May Monthly Meeting.—The May general meeting was held at the State Service Union rooms, Elizabeth Street, City, on Friday, 22nd May. The Chairman was Peter 4PJ, our President. Several apologies were accepted, one being from Al 4LT, who is not in the best of health. Over 60 members were present and it was pleasing to see such a large number of our junior members present. An important item was raised at the meeting, namely, an organiser is required to fill the position of Civil Defence Co-ordinator for this State. Mick 4ZAA reported on the Scout venture at Nambour which was held over the Easter holiday.

After general business was dealt with, Rick 4VR produced his "Electronic Bug" cum c.w. relaying machine. Rick gave an interesting description of all the setbacks he had encountered during the many years he had been toying with the idea. Suitable components, in particular, a relay sensitive enough to follow fast c.w. keying, were difficult to obtain. Eventually he obtained, by courtesy of a VK3, a suitable relay and set to work to produce this brain child of his. He gave demonstrations of the machine operating at speeds of up to 44 words per minute.

Son Brian 4RX then got to work with the aid of sketches and gave an explanation of what happens electronically inside the little gadget. The talk and demonstration were very well received by the meeting. While not many questions were asked, it was very noticeable that practically everybody at the meeting went up after the lecture and had a close-up view of this quite unique machine. A vote of thanks was moved by Stewart 4LA and thanks to Rick and Brian was shown in the usual manner. The meeting concluded with the usual tea and "earbashings".

News of Our Members.—Claude 4UX is on holidays in Brisbane. His holiday will serve a dual purpose since while he is here, he is to give his daughter away in marriage. Librarian K. Long, 4VM, is in the south on three weeks holiday. We hope he took plenty of warm clothing as the weather here in Brisbane is quite cool. Harry 4HA has been on the ill list but latest reports say that he is on the mend and should be back soon to his old form. Stan 4SA reports that keen interest is still being shown in the A.O.C.P. Classes. In this effort, Stan is ably assisted by Sid Carter. John 4RZ, the State Co-ordinator for the Oscar III project, is on the bands every morning on both 80 and 40 mx and on the v.h.f. band on 2 mx most evenings at 7.30 p.m. discussing this project. 73, 4ZBD.

TOWNSVILLE AND DISTRICT

Here we are again, and the conditions on the band seem to be opening up for short periods on 14 Mc. when VEs can be worked quite easily of an afternoon, not to mention many Ws. It is galling to hear the southern VKs still calling the Africans with dead silence from them in this locality.

I wonder how many of you read the article in Dec. "CQ" page 69, and did you read it fully or just glance at it and bypass the meaty question in it, always thinking that it cannot happen here. Something similar in a smaller degree did happen here. As some will recall, my letter in the Correspondence page a few years ago. With the ever poaching of the Amateur rights, we want to be on our toes. Remember the I.T.U. sits probably next year and readers of "73" will see the things that are happening in U.S.A. I think that Federal Executive should be printing something in each "A.R." of what we are doing in regard to the forthcoming I.T.U., be it ever so little.

Visitors to the shack this month included Bob 4MF, who seems interested in coming back on the air again—this time with mobile gear, also the boy from the back of beyond, Merv 4ZMD, who has finally made the city promotion. Very keen to get into his new QTH and get started and try and use fair means or foul that the locals frequent the v.h.f. bands.

Bert 4LB returned from holidays in the capital city, where he was entertained by practically every Amateur. Speaks very highly of the club in Rockhampton and their membership of over the century.

Congratulations to Claude 4UX on the fine article in last "A.R." on the HE30. Very fine indeed, only for one horrible mistake, see end of paragraph head second column. This costs money and how? He may be one of the lucky [redacted].

You chaps on s.s.b. using vox, do not forget to sign the station call now and then. Remember the Regulations in this regard. Many go well over the allotted time by two or three times.

See that the VK7 Division are girding their loins and mention in last "A.R." about R.D. Contest, remembering the old battle cry "Tassie expects . . ." So you chaps prove that it wasn't a fluke by rallying around again. 73, 4RW.

SOUTH AUSTRALIA

Let the cheering, the tumult and the tom-toms cease, let the villagers return to their villages, and last but by no means least, let the Editor and the Publication Committee, with a slight tinge of red in their faces, retire to their sanctus sanctorum, let us gently lower the curtain on what has now become known as the great misunderstanding and give praise for the fact that VK5 has returned to the fold, bigger and better than ever. As a matter of fact when I finally sorted out the rumours and the rumour of rumours, and it became clear that Divisional notes were out, I immediately mounted my umbrage and went forth out into the night determined never to return, no matter how many noughts might be offered by Ye Ed. to entice me back.

The reason I finally broke down and consented to accept a couple of noughts or so added to my salary was not alone for the money, but principally because during my loss of opportunity of fighting my years-old battle with Pincott (2AFJ) he, with his usual cunning and resource, had entered my domain and was quite successfully brainwashing everyone he came in contact with as to what a champion fellow he was, to say nothing of what a lovely couple his XYL and daughter were. Joan—how could you??? When I returned from my holidays—no I did not flee the hills with the invasion of VK3 types for the Convention, despite many rumours to that effect—everybody I met went out of their way to tell me, and I quote: "My word that Ken Pincott and his family are charming people, he is so suave and dominating, and his wife and daughter took the town by storm"!!!!

Took the town by storm is right, how low can one get? I tried to tell all and sundry some of the things he has written about me, some of the terrible things he has written about the famous city of churches and pubs as he sneeringly describes us, but all to no avail, they are still "a lovely and charming family". Lovely and charming!! and the cocky came back and married the cage. Any way you look at it, it tiddley-winks, and revenge must be mine, from now on I am desecrated to—I mean dedicated to a policy of an eye for an eye and a tooth for a tooth (I can only spare one tooth), but believe me it is on, well and truly, and that is why I have returned to take up the pen and retaliate, and may the worst man lose, Pincott no less.

My little tilt in the VK5 journal at the v.h.f. boys and what about some notes, brought forth results much quicker than I bargained for. Eric 5ZEJ came back hotfoot and submitted some notes for the next edition, and if the build-up in the editorial column means anything, the notes will be a regular feature. Nice work Eric, because whether we like it or not in VK5, the v.h.f. gang certainly are a progressive and enthusiastic bunch, and at the present time are right out in front in VK5 Amateur Radio doings and that's not "squaring off" either, so why not have regular v.h.f. notes in the journal?

I noticed in the journal that Arthur 5HY has now achieved 50 years of "amateur" existence in VK5. As the paragraph went on to say, "he looks too young to have been licensed half a century ago," a statement which will be agreed to by all who come in contact with him, both on and off the air.

Joe 5ZCP from Whyalla has secured his two letter call at last and whilst the exact call is not yet known, rumour has it that he is after 5CP. Hope you get it OM, and congratulations are in order.

The Rev. R. Guthberlet, who operates the Open Door Radio Club at the Methodist Church at Mount Barker (5OD)—Bob to you—has been appointed as Co-ordinator of Youth Radio in VK5. Are you listening Ken 1KM? The next job to be done is to get all of our Youth Clubs registered with Bob and establish liaison with Rex 2YA and go from there. Try that one on your bazooka, Ken!

Well, the Convention has come and gone, and if all is to be believed, VK5 upheld its reputation of being on the ball, and no one worked harder than our genial and industrious Federal Councillor, that t.v. type, Geoff 5ZCQ, upon whose burly shoulders fell the job of handling the job of organising the whole shebang. As one who stood up in open meeting and said, when it was mooted that VK5 host the Convention, that we would fall down on the job, taking the general apathy displayed for jobs of this nature, I humbly and sincerely apologise to all concerned, and can only say in extenuation that I am happy to have been proved so bad a judge. I cannot close this paragraph without again protesting that I did not flee the hills because of the invasion of VK3s into our fair city. I repeat, I like VK3s, there is a definite place in this world for VK3s, but so far I have never been able to get the name of that place in print!

OBITUARY

G. F. (LUKE) LUCAS, VK5LL

It is with sincere regret that the VK5 Division announces the sudden passing of Gilien Frederick (Luke) Lucas, VK5LL. First licensed in February 1936, he was active on all bands up to a few hours prior to his death.

Living up to, and by, the Amateur Code, he will be missed by all with whom he came in contact both on and off the air, and to his sorrowing wife Pearl we extend our deepest sympathy in her bereavement.

The wild man from Norfolk Islands, you know, the one with a nose through his bones, Arch 5XK, is about to leave Lucindale and take up residence at the Semaphore G.P.O. Little did he think when he used to deliver telegrams from that Post Office as a lad that he would one day return as the big noise. Arch at the moment is not playing speaks with the VK5 Division because of the fact that no Divisional notes appear in the magazine. Well OM, that matter has been remedied, so what about making it up with us? Oh come on now, what about rejoining and I will try and get you on Council next year. I could make you my secret weapon for 1965. The same to you Brother!

Notice in the v.h.f. notes in the journal, oh yes I read them, if only to see just how far Eric 5ZEJ will go in patting me on the back! Anyway, I notice that "The Admiral," ex-5ZAH, has now joined the "high" types and sports the brand new call sign of 5VB. Welcome OM, and nobody has worked harder for the honor (5ZEJ please note) nor is more deserving. Nice work Vern, and hope to contact you some day. What's that? I am never on. Don't you fall for that old gag. That's some of the propaganda of Ye Ed., may his blue pencil never turn red!

Garry 5ZK now has a beaut 80 ft. tower plus piping to give him a full wavelength above ground for 20 mx (v.h.f. calculations, not mine) and if rumour is to be believed, Curl 5CL has purchased a 30 ft. tower which at the moment of writing is in the course of erection.

It has always been my policy never to intrude into the domain of the v.h.f. scribe with respect of notes or information, but for once I am going to break my rule to say that Al 5ZCR will be wearing the ball and chain this month and everybody wishes him well. Don't forget my usual admonition to those about to take the fateful step—"DX before dishes". As you start, so you finish OM. "What's that dear? I have not finished wiping up the dishes?" Oh fie upon me, how could I be so remiss. Get me, Al?

My special agent from Mount Gambier is right on the ball. Without any prior notice he assumed that I would be writing the notes for this month and came to light with the doings of the S.E. boys. If he keeps this up I will have to give him one of those noughts that the Editor is fond of handing out to me!

Stuart 5MS is on holidays at the moment of writing, and rumour has it that he is now the proud possessor of a new s.s.b. transmitter, a Japanese job, the same type as Bert 5BB is using. Erg 5KU has been making himself heard on the air with plenty of c.w., and has his beam working again. Claude 5CH is another one heard quite often on c.w. at this location. He is troubled slightly with t.v.i. on the higher bands, which must be frustrating to say the least. Col 5CJ, apart from the week-day lunch-time skeds on 7 Mc. and sometimes on 3.5 Mc., has not been very active. He has given up the 6.30 a.m. sked on 144 Mc. for the winter time. I wonder why?

During my enforced absence from these pages I received several letters from a number of my readers, some of whom I knew, but several from those I did not know. To these correspondents I say thank-you, and to the unknown reader who bluntly told me to stop sulking and get on with the job, I can only plead not guilty. I never sulk—I only mount my umbrage!

One letter came all the way from Bonny Scotland, no less than GM3HOM, who will be better known to you as ex-VK5RC—Joe Reilly. He also included a copy of the "GM" magazine which is the official publication of the Radio Club of Scotland (GM3RCS). Many thanks Joe, nice to hear from you again. He said that he was missing the news of the VK5 gang in the magazine, but was at least reading a little about them in the VK5 journal. Will pass on your 73, Joe.

A welcome but perhaps unexpected visitor to VK5 recently was Ross WB6DEX), better remembered as VK5AJ and for a short while as VK3AJL. Actually he returned in a blaze of glory as Professor W. R. Adey, Professor of Anatomy and Physiology and director of the space biology laboratory at the University of California. During his five-day visit to his home town he lectured at the University and at the Royal Adelaide Hospital at the invitation of the post graduate committee in medicine of the University of Adelaide at the Royal Adelaide Hospital and also delivered the Cairns Memorial Oration in the Verco Theatre at the same address. Despite radio and t.v. commitments he found time to renew acquaintance with many of the VK5 boys, even spending quite a time on the telephone with me on a purely personal matter. All of which adds up to the fact that fame has not altered him one whit, which in my humble experience and contact with fame, is something to write about. Nice to have met you again Ross, and there is a tinge of pride in my voice as I boast to all and sundry of our many differences of opinion! Ha!

My personal agent at Port Pirie reports that the club up there is going great guns, especially the youth side of it (are you with me, Ken?). The Youth Club is now a separate set-up and meets once a week instead of the fortnight in the past. Ray 5RM is the new President, John 5ZBZ is the Vice-President, and the old work horse Bruce 5MC, ex-5ZEG, is again the Secretary. Good news to see that Bruce is now one of the squares with a two-letter call, and he has been heard on the 7 Mc. lunch-time net on several occasions. Bert 5EQ on a recent visit to VK2 (did they brainwash you Bert?) contacted Rex 2YA and tied up facilities for the club's technical advancement. This is all good news and goes to show just what can be done with an enthusiastic committee.

The news of the passing of Luke 5LL came as a great shock to the VK5 boys, as I understand that he was on the air on 3.5 Mc. only a few hours before his death. Claiming no technical ability, he simply followed the Amateur Code to the letter throughout the many years that he followed the hobby of Amateur Radio, and the many beginners that now have tickets are a mute testimony to the wholehearted assistance he has given them at a time when they needed it most, a quality that possibly many of the more technical minded boys could have emulated. A good Amateur has passed on, he will be missed by many.

Now it wouldn't do to finish these notes on such a sombre note so perhaps a few words on a somewhat unusual meeting night held by the premier Division recently. The set-up was that three intrepid members should address the meeting as to "Why they used their particular mode of transmission".

The three daredevils were Tubby 5NO, on c.w.; Al 5ZCR, on v.h.f.; and last but by no means least, our genial President (the velvet hand in the iron glove—know him?), on s.s.b. The night was a huge success, the various speakers excelled themselves in upholding the merits of their various modes, in fact at one time it looked as if we would have to call out the riot squad as Al stood with his back to the wall and repulsed attacks from right and left. Nice work fellows, you all deserve a putty medal, but you won't get one.

I was a little disappointed that I was not called upon to defend a.m., after all, it is a mode, but I succeeded in getting my share when I was called upon to propose the vote of thanks to the three speakers, and in doing so brought down the house with my explanation as to why I stuck to a.m. The simple fact is that on the first occasion I sat for my 1st class ticket I went to pieces on the code, and Johnny 5KO, who was the examiner, suggested that on the day of my encore with the code I have a good feed of peanuts, which he earnestly assured me were very good for nerves. Well, to make a short story longer, I did this and the result was that I was not game to leave the safety of my house for three days with the consequent trouble that every time I get within three feet of a Morse key I still get a reflex action that is most distressing to say the least. Therefore c.w. is out with me. S.s.b. is an unmentionable subject also, which only leaves me with a.m. —so there you are.

Phil 5NN, who had staunchly supported s.s.b. earlier, in thanking me for my closing remarks, suggested that my trouble with the dah's and the dit's, especially the dit's, made quite a moving story, and completely broke up the meeting, much to my discomfiture as I did not think for one moment that anybody present would take my remarks the wrong way! 73 de 5PS—PanSy to you.

WESTERN AUSTRALIA

These notes are the first after a long period and I hope that they will be of interest to all.

I must say that for notes to appear in "A.R." each month means that they have to be written and for them to be written requires information. This is where you as readers and subscribers to the magazine come in. If you don't pass on what you know to your scribe, then he fast exhausts his supply and then the notes disappear. After having read these notes you will realise that some information has been passed along by someone, then perhaps you can pass on something about my previous informer. Let us call it reciprocal trade.

The new Council have taken up the reins of the Division now and would appreciate any comments, suggestions, etc., be they of constructive nature or otherwise to be passed along. Maybe you have some idea which could help your Council to create interest and activity in our ranks, if so let them know.

I have been asked to convey the very warm thanks of Ed and Lefty of the U.S.S. Gridley to all Amateurs who made their stay in VK6 such a success. They only hope that their conducted tours of the ship were of interest to all participating in them and were received as part payment in return to the hospitality given to them. We realise that VK5 started something and VK6 saw it through to a very fitting close.

By now many Amateurs who are active must realise that single sideband has developed quite quickly in VK6. There are very many stations now using this mode of transmission. One should be game enough to suggest that the a.m. type of transmission should be turned on in force as a counter measure. This would at least have activity on the bands. Please do not get the idea that because I use sideband that other modes should not be used or encouraged. Let us hear you on the air, no matter what type of modulation you use.

Now we have been wondering what has become of the X group these days, but some information has leaked out. Frank 6XF seems to be following that little white ball for miles these days, maybe he finds this quite different to the big black balls ("Oh I'm sorry, Bowls") which he chases during the summer. Then we have Robbie; somehow I cannot believe that work takes up all of your time, Robbie. Then Herb 6XO, he made a trip to Perth the other week but the lust for the water saw him in Fremantle and near a certain ship gazing longingly up at something but he did have difficulty with — . . — — — — when some one stood in front of him. Maybe I could not whistle clear enough? What about something on the air from the X group?

Another thing bothers me about a well known Amateur from Narrogin who spent all one Sunday morning trying to give away a key. He finally left it in a bag in the middle of the road, only to have someone find it. Fancy him not having mobile gear with him.

Talking of Narrogin, we believe that Ian Calder passed the c.w. and is now waiting for the paper work, then he will become active. Congratulations Ian, also to you Rus if what I hear about you is correct. Rus, what arrangements have you made in the lines of extra tax or something to make up for loss of revenue by the department? After all, that nomination fee coming in regularly will be missed.

It is very good to hear some of the missed call signs showing up on the air again. Some have only been off for a few months, others for longer, but nevertheless it is good to hear them again.

I believe that the Amateur population of Esperance is to move again. We do know that one is on the way to Nauru and will be operating from about 29th June under call of VK9. Arthur 6MJ is to move to Broome in the future, which leaves the town of Esperance pretty short of Amateurs.

The boys of the northern districts seem to have gone very quiet. How about letting us hear Geraldton, Carnarvon, Derby and Milling and Moora more often?

I would like to remind VK6 Amateurs that we lost the R.D. Trophy last year, but this year we want it back. It is up to you. Work your gear, submit your logs and no one can beat us. We hope. 73, 6RY.

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TASMANIA

Won't be long now to R.D. week-end—only seven weeks to go. Hope you took my advice last month and have started cleaning out the spiders, etc. If you want log sheets, then let your broadcast officer know on the Sunday round-up and some will be despatched pronto.

The June meeting was blessed with an excellent lecture by John 7ZOO on broad-band V.h.f. Equipment as planned for the Tas.-Vic. link. His talk (which was recorded for future use) was supported by slides of various types of aerials and equipment, block diagrams, etc. Here is a man who I feel sure enjoys his work. He really got wound up and had to be reminded of the time after about an hour and a half. But nobody seemed to notice, they even returned the samples of travelling wave tubes and klystrons he brought along.

A very welcome stranger at this meeting was our old friend "Chummy" Moorehouse, a pre-war councillor for many years. Don't make it so long till your next meeting Chum!

VK7 has now got two licensed YLs. Number one of course is Mrs. J. Batchler, 7YL. Our latest addition is Anne Landers, who has taken out the call of 7ZYL. Anne, who is to be married to Michael (7ZAV) towards the end of September, sat for the A.O.C.P. exam in April for her theory, having got the Regs. at an earlier try. So far the c.w. section has eluded her, but she's going to get it, she says, even if when she goes to the exam in her wheelchair, she's only eligible for the call sign 7OW.

Looks like the Southern Zone is to lose another active member to the other end of the island as Dave 7ZAY is going to Mt. Barrow in course of duty to his employer.

Other tit bits include the fact that m.c.w. can now be heard (and read?) on 2 mx, since Ian 7ZZ has added this facility to his tx. Also Phil 7ZAX now has mobile gear in his Mini—don't know yet where he's mounted it, but knowing Phil it would be a good installation and not just a heap of gear on the back seat.

Ray 7RK is in the Repat. Hospital at time of writing. Hope you are soon your old self again Ray, and getting about like a two-year-old before too long.

Enough for now, don't forget the R.D. 73, 7ZAS.

NORTH-WEST ZONE

Last meeting was a business meeting, main points were a report on the S.s.b. Convention and the possibility of a Youth Radio Scheme in some form.

Most members are fairly active on the bands. Ken 7KH is doing much DX on c.w. and Basil 7BL seems to be getting out well of late. Reg. 7ZAO has shifted camp to a more favorable site for v.h.f. and hopes to have his beam up soon. Congrats. to Winston on obtaining his L.A.O.C.P. recently, he has already built a very nice mobile rig ready to go the minute his call sign arrives!

Not long to go to the R.D. Contest now, so all able to participate should maybe tune up the rig—some time now since it was held by VK7.

Now we have a large number of Z calls in the zone, maybe something could be done to participate in the next Oscar project? Keep it in mind, anyway. 73, 7ZBH.

NORTHERN ZONE

The usual lack of activity on the bands has continued throughout this month. The only new stations heard have been Dave and Ric, 7ZAI and 7ZAT, who were portable on Flinders Island and who regularly worked into Launceston at strength 8 to 9. John 7JF has been working DX on 20 mx on a new quad antenna and Kevin 7ZAH has been heard around Launceston with a mobile 2 mx rig. Ray 7RK has just undergone an operation in Hobart. Hope you are feeling better soon, Ray.

Bob 7ZAL is soon to come north for six months with his rig. We express a welcome to you Bob. Congrats. to Greg Power for passing the L.A.O.C.P. at the last examination. 73, Leigh Pretty.

HAMADS

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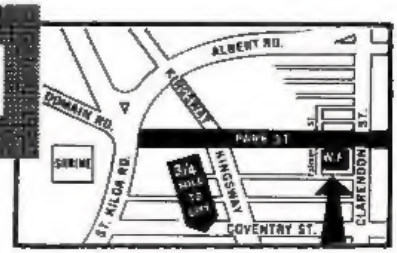

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